SURVIVOR-CENTERED TRANSFORMATIVE JUSTICE: AN APPROACH TO DESIGNING SOCIOTECHNICAL SYSTEMS ALONGSIDE DOMESTIC VIOLENCE STAKEHOLDERS IN US MUSLIM COMMUNITIES

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Submitted to the faculty of the University Graduate School

in partial fulfillment of the requirements

for the degree

Doctor of Philosophy

in the Luddy School of Informatics, Computing and Engineering

Indiana University

August 2023

Accepted by the Graduate Faculty of Indiana University, in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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DEDICATION

To my family, mentors, and friends.

ACKNOWLEDGMENT

I want to express my sincere gratitude and appreciation to all those who have contributed to completing this dissertation. Their support, guidance, and encouragement have been invaluable throughout my academic journey.

First and foremost, I would like to extend my deepest thanks to my advisor, Dr. Lynn Dombrowski. Your expertise, mentorship, patience, and consistent support have been instrumental in shaping this research. Especially during times of transition, when you first became my adviser and during the pandemic. Your guidance and insightful feedback have significantly contributed to the quality and depth of this dissertation. You modeled competent advising by being approachable yet assertive, building on the strengths of others and knowing where more support is needed, genuinely sharing your experiences, and backing us up during this vulnerable process.

I am grateful to the members of my dissertation committee, Dr. Davide Bolchini, Dr. Erin Brady, Dr. Khadija Khaja, and Dr. Sarita Schoenebeck. Their valuable insights, constructive criticism, and thorough review have immensely improved this work. I am grateful for their commitment and dedication to ensuring the rigor and integrity of my research.

I would like to acknowledge the support provided by Indiana University and the Luddy School, specifically the Department of Human-Centered Computing. To Dr. Bolchini for being a guiding mentor and academic father, encouraging us to pursue our interests, and supporting us in all ways possible. The resources, facilities, and funding available to me have been crucial in effectively conducting my research. I am thankful for the valuable opportunities that have allowed me to interact with esteemed scholars

and researchers within my field. I am grateful for my colleagues who lifted me despite the distance and the accountability buddies who helped me push through the endless writing.

I am grateful to my research collaborators, who generously shared their time and wisdom with me throughout this dissertation. I wholeheartedly appreciate your contributions and hard work! Your influence has profoundly shaped both my research and my perspective on life. I also extend my thanks to the CSCW and CHI communities who keenly engage with and care to advance HCI work through the peer review process. Their discussions and insights have been an integral part of solidifying this work.

I am deeply thankful to my family for believing in me and lightening up our days with laughter and support. I am profoundly appreciative of and grateful for my parents, who supported me endlessly in every shape and form, showed and ingrained in me how to be dedicated and responsible, and are always rooting for me. Finally, I am thankful for my husband, Hussain, I couldn't have done it without you. Thank you for helping me stay motivated, well-fed, and cared for, and for being patient and supportive throughout the ups and downs of this journey. I am grateful for my daughters, Jude and Yara, who challenge me to be a better person every day, build my strength, and force me to value the slightest windows of time and be present, easing the stress away from the crunch of graduate school.

Hawra Rabaan

SURVIVOR-CENTERED TRANSFORMATIVE JUSTICE: AN APPROACH TO DESIGNING SOCIOTECHNICAL SYSTEMS ALONGSIDE DOMESTIC VIOLENCE STAKEHOLDERS IN US MUSLIM COMMUNITIES

Domestic violence (DV) is a social, political, and legal problem that requires contextual examination. In the United States, earlier advocacy work focused on law reform to empower survivors in influencing the public and state to take DV seriously and provide resources to support and protect survivors. However, harm is still perpetuated systemically and socially for survivors, especially those from racial and religious minorities.

In this dissertation, I focus on domestic violence within the US-based Muslim population due to the unique issues Muslim survivors face when dealing with governmental services and service providers (*e.g.,* gendered Islamophobia, racial discrimination, punitive actions) and within the Muslim community itself (*e.g.,* community trauma, faith leaders lacking appropriate training).

This work incorporates three phases of research that utilize qualitative and design methods to examine the forms and dynamics of domestic violence, help-seeking and healing challenges, and survivor advocacy, abuser accountability, and community transformation interventions. I argue that to pursue justice for survivors in design research, a multifaceted approach rooted in principles from Islamic feminism, trauma-informed care, and restorative and transformative justice tenets is needed. Consequently, I propose Survivor-Centered Transformative Justice (SCTJ), a framework to discern individual and systemic harm, to understand how to design *alongside* victim-survivors,

and to focus on victim-survivors' autonomy. I illustrate how SCTJ allows researchers and designers to account for individual inequalities, recognize communities' preferred approaches to pursuing justice, tackle the underlying conditions enabling harm, and provide interventions that alter, repair, and reduce harm within different scales of relationships. Additionally, I present the concept of healing structures, which aim to safeguard against harmful community practices, discriminatory laws, and practices while facilitating collective and survivor-centered interventions to promote healing.

Lastly, I demonstrate the potential for design research to progress by taking a closer look into the belief systems, cultural values, and surrounding conditions that contribute to users' obtainable choices and decision-making processes, and by centering the needs of people at the margins. With this empirical, theoretical, and design work, I present insights that inform the HCI community at the intersection of social justice-oriented design, Islamic feminism, and gender-based violence.

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LIST OF ABBREVIATIONS

BIP: Batterer Intervention Program

CJS: Criminal Justice System

CSCW: Computer-Supported Cooperative Work

DV: Domestic Violence

FGM: Female Genital Mutilation

GBV: Gender-based Violence

HCI: Human-Computer Interaction

IPV: Intimate Partner Violence

KSA: Kingdom of Saudi Arabia

MENA: Middle East and North Africa

RJ: Restorative Justice

SCTJ: Survivor-Centered Transformative Justice

TJ: Transformative Justice

US: United States

Chapter One: Introduction

Technological ethics research is imperative as technology seamlessly blends into our daily lives and shapes our behaviors and reasoning (Burton, Clayville, Goldsmith, & Mattei, 2019; Khan et al., 2022; Teran, Pincay, Wallimann-Helmer, & Portmann, 2022; Zheng, Tang, Liu, Liu, & Huang, 2022). Recently, HCI work has examined ways to create equitable futures through theoretical frameworks (Asad, 2019; Costanza-Chock, 2018; Lynn Dombrowski, Ellie Harmon, & Fox, 2016) and sociotechnical interventions (*e.g.,* tackling oppression within marginalized communities (Dickinson et al., 2021), wage theft (Dombrowski, Garcia, & Despard, 2017), citational justice (Ahmed et al., 2022).) Among the oppressive conditions studied is gender-based violence (GBV), characterized as violence directed towards an individual or group due to gender identities and fundamentally connected to gender inequality, the misuse of power, and harmful norms (Center, 2015). Forms of GBV examined in HCI include online harassment and intimate partner violence (Bellini et al., 2021; Freed et al., 2018; Tseng et al., 2022). In this work, I focus on domestic violence (DV), the most prevalent form of GBV (Center, 2015), to illustrate examining and designing for multi-layered social issues.

Domestic violence encompasses intimate partner violence and family violence, which can involve abuse from intimate partners, siblings, parents, children, in-laws, extended family members, community members, and community institutions, all of which can influence DV dynamics (M. Kim, 2010). While domestic violence is prevalent in all socioeconomic settings, identity highly impacts how one experiences and recovers from abuse. Victim-survivors from marginalized communities deal with a myriad of social, systemic, and legal intricacies (Armatta, 2018; Coker, 2002; Drost et al., 2015;

Five, 2007; Goodmark, 2004; Nocella & Anthony, 2011). In this dissertation, I use two DV case studies; one focused on Saudi women's domestic safety concerns and experience and their sociotechnical agency practices toward abuse (Rabaan, Young, & Dombrowski, 2021), and the second on US-based Muslim victim-survivors' experiences, specifically around their help-seeking and healing challenges and justice processes (Rabaan & Dombrowski, 2023). I chose to focus on Muslims, defined as people who self-identify, culturally or religiously, with any Islamic sect (Sedgwick, 2000), for the following reasons: DV-related research within non-Western and Muslim contexts is scarce both within HCI and the social sciences (Hammer, 2019; Oyewuwo-Gassikia, 2016). Muslims are an at-risk population of prejudice and systemic discrimination in the US and Europe, suffering historic Islamophobia starting in the early 20th century and rising ever since (Hammer, 2019; Ogan, Willnat, Pennington, & Bashir, 2013). Nearly 75% of Muslim Americans either know or have experienced acts of discrimination against Muslims following September (Hammer, 2019)11, 2001, and recently, hate crimes have been amplified by hate speech promoted by politicians and the Muslim ban (Abadi, 2015; Abu-Ras, Suárez, & Abu-Bader, 2018; Ali, 2017; Lajevardi & Oskooii, 2018; Lipka, 2017). Such factors resulted in a complex relationship between the Muslim community and law enforcement, particularly in the United States. This complicated relationship directly reflects on Muslim victim-survivors, given the tight coupling of DV and the criminal justice system, forcing them to refrain from state services for protection and aid (Hammer, 2019; Oyewuwo-Gassikia, 2016), further contributing to victim-survivors' challenges in their response to abusive situations.

In this dissertation, I led three phases of research that together provide a holistic understanding and design approach to addressing domestic violence within a marginalized community. I first conducted a qualitative study to understand DV forms and highlight sociotechnical agency practices within a non-Western context (Rabaan et al., 2021), followed by a participatory design study to examine the US-based challenges of DV help-seeking and healing processes and desired sociotechnical interventions (Rabaan & Dombrowski, 2023), and lastly, a focus group and concept validation study to brainstorm and design for a survivor-centered transformative justice approach by involving direct stakeholders within the DV ecosystem (Rabaan, 2021; Rabaan & Dombrowski, 2023).

Throughout this dissertation, theory and empirical investigations were closely connected, where theoretical frameworks and concepts guided and supported the data analysis and implications. I began by defining agency within the DV and Muslim context by studying intersectional and Islamic feminist theories. I turned to restorative justice (RJ) and transformative justice (TJ) theories. I adapted a survivor-centered transformative justice (SCTJ) approach, to help explain and elucidate the challenges Muslim DV victim-survivors face socially and systemically while centering the victim-survivor's agency. By leveraging such theoretical backing, I found that victim-survivors often do not choose to leave the abuser. Instead, their responses to addressing abuse are contingent upon careful calculations around their social, political, and systemic factors (Rabaan et al., 2021). Further, across current services and resources, victim-survivors are decentered, which refers to a person's choices, preferences, and autonomy are disrespected and ignored by professionals, community leaders, and laws (Nolet, Morselli, & Cousineau, 2021)

(Rabaan & Dombrowski, 2023). Lastly, tackling multi-layers of oppression requires collective, customized, and multifaceted approaches, which are currently largely lacking. Overall, I argue that justice for victim-survivors starts with closely understanding their historical, cultural, and political developments and working *alongside* them in identifying their needs and achieving their goals. In addition, survivors' justice entails promoting abusers and community accountability and reshaping the social and structural factors contributing to the abuse.

Throughout this work, I have built sensitivities to study and work with a marginalized and traumatized population in a field where solutionism and generalizability are celebrated. In the discussion chapter, I reflect on ways to preserve users' dignity through our research ethic, methodological practices, and design implications. I contend that social justice-oriented research conflicts with the fail-fast corporate logic and design "solutions" where technology is developed and is perceived to solve problems almost instantly. Solutionist approaches are mostly unfeasible in social problems (Kolko, 2011), and may cause more harm than good (Sterling, 2013). Refraining from perpetuating harm in research and design is slow, evolving, and cumulative work. It demands viable support from research institutions, funding agencies, conferences, publication venues, and industrial corporations developing our daily technologies. Lastly, I scrutinize ways to adapt SCTJ on a research-level by centering the user and focusing on their values and harm reduction strategies, despite the potential conflict with the researcher's definitions of justice, promote researchers' accountability, and call for broader change in the field.

Next, I showcase the research questions and aims tackled in this dissertation.

1.1. Research Questions and Aims

Ultimately, my dissertation addresses the following research question:

> "How can we, as design researchers, incorporate key survivor-centered transformative justice attributes into design, while rooted in the sociocultural, historical, and political context of Muslim domestic violence survivors in the United States?"

I address this research question through the following aims:

Aim 1: Identify domestic violence forms, interventions, and help-seeking and healing processes' challenges within Muslim communities in non-Western (*i.e.,* Saudi Arabia) and within the US contexts.

I attended to this aim in phases one and two of this research (Rabaan et al., 2021) (Rabaan & Dombrowski, 2023), where I answered the following research questions:

> **RQ1:** What are the types and dynamics of DV within Muslim communities in Saudi Arabia and in the United States?
>
> **RQ2:** What does the help-seeking process look like for survivors? What are the steps taken in identifying the abuse, support, reporting, mediation, coping strategies, and leaving the abuse? Who are the stakeholders involved (*i.e.,* the ecosystem of support)? And what are the challenges victim-survivors face within the immediate and larger community during their help-seeking and healing journeys?
>
> **RQ3:** What is the role of technology in dealing with DV? What are the concerns that experts (*i.e.,* survivors, service providers, advocates, faith leaders (i.e., imams)) have around technology? And how do they envision and perceive

technologies to work in addressing their challenges and concerns? When is technology harmful or ineffective?

RQ4: What are the values of Muslim survivors, and how can we design towards those values?

Aim 2: Identify and evaluate key design attributes for survivor-centered transformative justice, trauma-informed care, and Islamic feminism for domestic violence interventions. Which I address in phases two and three of this dissertation (Rabaan & Dombrowski, 2023) by answering the following research questions:

RQ1: What are the current SCTJ practices in addressing DV in the Muslim community?

RQ2: What is the role of ICTs in advocating for and supporting survivors' decision-making? Promoting accountability for abusers and enablers of abuse? And broadly, in influencing the community to respond effectively to abuse?

RQ3: How do we integrate trauma-informed healing principles, include allies, and resources, direct stakeholders, facilitate working together as a team, support victim-survivors, and promote community accountability in design?

RQ4: How are the proposed design principles from an SCTJ lens perceived by experts working extensively in the DV space? When can technology-mediated interventions be harmful in the context of DV within Muslim communities?

1.2. Contribution Statement

Tackling harm stemming from social inequality necessities leveraging numerous perspectives, including design research. By supporting this line of social-justice-oriented

research, this dissertation makes the following theoretical, empirical, and design contributions:

- Theoretically:
  - I introduce Islamic feminism to HCI as an analytic and design lens, which builds sensibilities to de-other populations by recognizing their cultural dimensions and historical developments, and as a result, acknowledge and support different decisions and definitions of justice.
  - I comprehensively compare Restorative and Transformative Justice tenets within the DV context. Consequently, I introduce Survivor-Centered Transformative Justice (SCTJ). SCTJ is an approach that uses complementary restorative and transformative justice principles in supporting victim-survivors' agency, encouraging community support and accountability, and accounting for and protecting against social and structural harm (Rabaan and Dombrowski 2023).
  - I demonstrate how combining survivor-centered transformative justice and design allows researchers and designers to 1) account for the inequalities endured by victim-survivors, 2) address underlying causes of complex social issues by working alongside disadvantaged groups and within existing structures, and 3) understand how community members define and prefer to work towards justice.
- Empirically:
  - I generate relevant and contextualized knowledge to inform equitable technology design. Specifically:

        - I expand the understanding of domestic violence in non-Western US-based and Arab Muslim contexts.
        - I highlight agency practices from an Islamic feminist perspective.
    - I address systemic and social power imbalances to account for the concerns of underrepresented voices.
    - I contribute to representation and reshaping the narrative around misrepresented groups (*i.e.,* Muslims and domestic violence victim-survivors) by depicting the historical, social, and political conditions forming choices and perpetuating harm, uncovering the complex layers of abuse and its consequences.
    - I highlight socio-technical mechanisms for establishing healing structures that foster justice-oriented processes for victim-survivors and their communities and aim to reduce harm, facilitate healing, and enhance resources.
- I demonstrate design implications:
    - For empowerment from *within* the participants' structures, by designing around cherished and socially familiar values.
    - For designing *alongside* users, by designing for harm reduction strategies and informed decision-making.
    - For tackling community and structural harm; by designing for community accountability and transformation, and systemic change.

Next, I articulate the premise and contribution of each chapter of this dissertation.

1.3. Dissertation Outline

I outline what each subsequent chapter discusses, argues, and contributes.

Chapter Two: Background and Literature Review

This dissertation draws from two broad research areas, including gender-based violence and justice-oriented research primarily in social work, HCI, and feminist and justice theories within the DV context.

Chapter Three: Methods

In this three-phase research, I conducted qualitative and design methods to examine and design for different facets of domestic violence-related challenges and interventions. This chapter shows a review of each project and its associated methods.

Chapter Four: Saudi Women's Sociotechnical Agency Practices in Addressing Domestic Abuse

In this chapter, I present results from my first case study examining Saudi women's domestic safety concerns living in Saudi Arabia and the United States. I identify three key practices focused on how women resist or deal with domestic violence based on Islamic feminist views of agency. For each practice, I highlight how interwoven cultural, religious, and political contexts impact Saudi women's ability to recognize and deal with domestic abuse. I attend to technology's role in enabling or hindering women's agency. The practices include 1) recognizing abuse, where women identify abusive situations; 2) managing abuse, where women find ways to cope with ongoing or anticipated abuse within their constraints and resources; and 3) seeking non-abusive futures, where women decide how to mitigate the abuse or leave their abuser.

Chapter Five: Survivor-Centered Transformative Justice: An Approach to Designing Alongside Domestic Violence Stakeholders in US Muslim Communities

In this chapter, I present results from my first case study on US-based victim-survivors' challenges when seeking help and healing from abusive situations. I identify the harms victim-survivors face when seeking DV-related services and interacting with community leaders and members. To address such harms, I adopt a survivor-centered transformative justice (SCTJ) approach, a framework to discern individual and systemic harm, to understand how to design alongside victim-survivors, and to focus on victim-survivors' autonomy. I explain under what conditions an SCTJ approach may be productive for designers. I use insights from the participatory interviews to highlight intervention areas for reducing harm, repairing harm, and promoting healing for victim-survivors.

Chapter Six: Survivor-Centered Transformative Justice Principles in Practice and Design

In this chapter, I present results from a design study conducted with multiple stakeholders within the DV ecosystem to develop coherent processes aligning with the SCTJ principles. I discuss the notion of healing structures and illustrate participants' practices, preferences, and design choices, and introduce three social mechanisms of healing structures relevant to HCI. Social mechanisms of healing structures include survivor advocacy, community accountability, and community transformation. I produced design concepts based on the outcomes of ten design sessions and corroborated the created designs with expert judgments, critics, and insights.

Chapter Seven: Design Implications and Conclusion

I conclude this dissertation by discussing the limitations of technology and how we view it as supplemental with the potential of harm reproduction if not studied carefully, and reflecting on how to improve our research ethic, methodologies, and design implications to avoid reproducing harm through our practice.

Chapter Two: Background and Literature Review

This section first expands the definition of domestic violence and demonstrates contextual details of the population I focused on in my dissertation; Saudi and US-based Muslims' domestic violence experiences. Second, I provide a comprehensive section on the theoretical framings that backed and shaped this research. Lastly, I compile and situate this research in relation to HCI scholarship and explicate the dissertation's contributions.

2.1. Domestic Violence and the Muslim Context

In this section, I examine domestic violence (DV) within the context of Saudi Arabia and the United States, where I inspect DV's definition, forms, and prevalence, and social and political elements related to abuse to provide a deeper understanding of what enables abuse and the measures taken by survivors and other entities in countering domestic violence.

2.1.1. Definitions of Domestic Violence

A popular category of domestic violence is intimate partner violence (IPV); which refers to abusive behaviors by an intimate partner, including physical violence, sexual violence, and psychological aggression, as a way to control the other individual (CDC, 2019; Wendt 2014). Physical violence includes hitting, shoving, grabbing, biting, denying a partner medical care, or forcing substance use; sexual violence includes coercing any sexual contact or behavior without consent, marital rape, forcing sex after physical violence, or treating one in a sexually demeaning manner. Psychological aggression consists of emotional and verbal abuse, including insults and attempts to

scare, isolate, or control a person (CDC, 2019; Justice; Nolet et al., 2021; Westlund, 1999). Intimate partners are individuals with whom the victim has an emotional connection, sees regularly, and has ongoing physical or sexual intimacy. The victim and perpetrator are recognized in public as a couple, and have intimate familiarity with each other's lives (CDC, 2019). Another less common category of domestic violence is family violence, which is "non-sexual abuse by a family member [including] physical force, emotional or financial abuse or threats to hurt the respondent or someone close to them carried out by a family member other than a partner (father/mother, step-father/step-mother or other relative)" (Flatley, 2016). I refer to both definitions of IPV and family violence as domestic abuse (DA) and domestic violence (DV) interchangeably. In this work, I consider the following categories of abuse: all forms of physical, psychological, and sexual abuse, economic-social (*e.g.,* preventing one from work or education, forcing one to marry or divorce), spiritual abuse ("any attempt to exert power and control over someone using religion, faith, or beliefs") (WebMD, December, 2020), using coercion, threats, and intimidation, using children, citizenship, or residency privilege, isolation, blaming, and denying abusive acts (Alhabdan, 2015; N. Ammar, Couture-Carron, Alvi, & Antonio, 2013; Brownell & Ko, 2012; Flatley, 2016; M. Kim, 2010; Nolet et al., 2021). Extending DV's definition to include all the prior corresponds to the DV dynamics found within Muslim and immigrant populations, as derived from related literature and the empirical findings of this work. For example, in interviews with social service providers and DV advocates, I found the problems of forced marriage (*i.e.,* "involving a lack of full and free consent of one or both parties" (McFarlane, Nava, Gilroy, & Maddoux, 2016)) and transnational abandonment (*e.g.,* "following marriage migration and abuse, a woman

is taken to her home country deceptively, on the pretense of a holiday, and abandoned there and her visa is revoked" (Anitha, Roy, & Yalamarty, 2018) to be common forms of abuse within the Muslim immigrant community (N. Ammar et al., 2013).

2.1.2. The Saudi Context

The Kingdom of Saudi Arabia (KSA) is one of several countries that make up the Middle East and North African (MENA) region. Their Arab culture partly defines countries within this area. While Arab culture differs from region to region, even within the same country (Hilal, 1971), it is broadly based on relational and collectivist values (Al-Dawood, Abokhodair, El Mimouni, & Yarosh, 2017; Hall, 1976). Values such as harmony and group wellbeing are appreciated over individuality, and decision-making is typically controlled by a central, authoritative figure (*e.g.,* patriarch of the family). History and tradition are highly regarded (Semaan, Dosono, & Britton, 2017), firm boundaries exist between insiders and outsiders, and societal roles are not typically questioned (Hall, 1976). Like other countries in the MENA region, Saudi Arabia mostly consists of a tribal society comprising hundreds of tribes and subtribes (El Mallakh & El Mallakh, 1982). KSA is religiously conservative, with Islam explicitly following the Sunni Hanbali school of thought as the basis for both the official religion and the national legal system (Alhabdan, 2015; Alharbi, 2015). A central tenant of Saudi's gendered culture is for men to act as protectors (or guardians) for the women in their family and for women to protect their family honor by adhering to the social rules of virtue (Al Fassi, 2019; Dodd, 1973; Hilal, 1971). While initially intended as a socially positive relationship, the "male as protector" role became a perceivable hindrance to women when the guardianship law solidified this cultural norm, which saw women beholden to men in

nearly all aspects of their lives. Guardians are male relatives (*i.e.,* father, husband, uncle, son) who are systematically assigned to their related females to provide protection by law (Alharbi, 2015). A guardian is known as a *wali* or *wassi*, which translates to a custodian. There are several underlying reasons for these cultural and social changes within KSA that moved towards more restrictive positions. A significant justification is the aftermath of the ultra-conservative movement known as *Sahwa* (*i.e.,* the awakening), which occurred in the 1970s and resulted in new laws and regulations that redefined cultural norms within the Kingdom (Meijer, 2010). Another justification is that current gender relations in Saudi are a product of capitalism and American oil corporations' intervention (Malak, 2019). While separating social and political events is challenging, both contemporaneous events likely impacted the current state of gendered social norms and laws (Al Fassi, 2019; UN, n.d.).

Domestic abuse is a serious issue in Saudi Arabia. Thirty-five percent of women in Saudi Arabia have experienced some form of domestic violence in their lifetime (Afifi, Al-Muhaideb, Hadish, Ismail, & Al-Qeamy, 2011; USDoHHS, 2019). Researchers speculate that women underreport their abuse due to social stigma, fear of retaliation, and lack of access to reporting agencies (Al Dosary, 2016). In 2013, the Saudi government introduced the Protection from Abuse law, where abuse is defined as "the practice or threat of physical violence, sexual assault, emotional abuse, or neglect committed against a woman or child by a person who has power upon either of them, whether through authority, responsibility, maintenance relationship, family relationship, or guardianship. It is considered abuse if a person omits, neglects, or fails to fulfill the duties or obligations to provide the basic needs of any family member or dependent under law or

religion." (Alhabdan, 2015). While this introduced law addresses physical, emotional, and sexual domestic violence issues in the KSA, the law does not explicate economic or social forms of domestic abuse, including rights to education, work, inheritance, and marriage (Alhabdan, 2015). In this dissertation, I describe how sociocultural and political norms have impacted Saudi women, specifically by examining domestic violence cases, how such norms perpetuate abuse, and how women express their agency in response to domestic violence with technology.

2.1.3. The American Context

Islam is the third largest religion in the US, following Christianity and Judaism. An estimate of 3.45 million Muslims lives in the US as of 2017, growing at a rate of roughly 100,000 people per year since 2011. American Muslims are one of the most racially diverse religious groups, at 25% black, 24% white, 18% Asian, 18% Arab, 7% mixed race, and 5% Hispanic (Review, 2021; WPR, 2021). About a quarter of US Muslims are natives, and the remaining are immigrants. The vast majority (82%) are American citizens, with the remainder (18%) as not US citizens (PEW, 2020). The social phenomenon of domestic violence (DV) is rampant in the US, where on average, nearly 20 people are physically abused per minute; one in four women have been victims of severe physical violence (*e.g.,* strangling, burning, beating), commonly between the ages of 18-24 (NCADV). Moreover, DV is believed to be higher among immigrants than among US citizens (Afrouz, Crisp, & Taket, 2020; N. Ammar et al., 2013; Brownell & Ko, 2012; College). Given the majority of American Muslims are new immigrants (PEW, 2020), the overall prevalence of domestic violence in the American Muslim community is suspected to be higher than the national average, which is supported by a nationwide

survey study conducted by two Muslim organizations (SoundVision and Islamic Social Services Association) (Oyewuwo-Gassikia, 2016). Intimate partner violence makes up 15% of all violent crimes. A study conducted in 2011 with 801 American Muslims revealed approximately 53% reported facing forms of family abuse, and 31% experienced IPV in their lifetime (M. Alkhateeb, 2012). The most prevalent form of abuse is emotional at 45%, followed by verbal at 41%, physical at 31%, financial at 16%, and sexual abuse at 15% (M. Alkhateeb, 2012). Despite the widespread nature of domestic violence, DV was only recently criminalized in 1994 by the US government through implementing the Violence Against Women Act (VAWA). VAWA allows for legal protection of DV victims along with federally funded services to aid survivors in their departure from the offender (USDoJ, 2020). The legal system reacts to, convicts, and issues restraining orders for abusers who commit "assaults, batteries, harassments, stalking, and destruction of property"(Goodmark, 2004). Such crimes, however, do not cover the spectrum of DV forms experienced by DV survivors-victims (*e.g.,* isolation from friends and family, controlling material necessities), and in many states, restraining orders are the only permissible type of evidence in courtrooms, specifically for custody cases (Goodmark, 2004).

Numerous services are provided to DV victim-survivors by governmental entities and private organizations. In this research, I refer to federally-funded services, non-profits, shelters, service providers, police units, and lawyers working in the DV space as mainstream DV service providers; such services typically follow a secular and individualistic approach to countering domestic violence. Many factors contribute to challenges of mainstream DV service providers in serving niche populations such as

American Muslims, including the massive burden on mainstream service providers to serve the diverse US, the complexity of DV as an individual, social, and structural problem, and the recent criminalization of DV (Abugideiri, 2010; Mimi E Kim, 2021; Oyewuwo-Gassikia, 2016). Several key obstacles exist to American Muslim women seeking help and reporting abuse. One is the diverse demographic; the majority are immigrants of ethnicities from over 50 countries (Ghafournia, 2017), resulting in language and cultural understanding barriers, limited knowledge of available DV and legal services, and the perceived high financial and social costs of pursuing services (Oyewuwo-Gassikia, 2016). Additionally, Islamophobia, racism, and the over-policing of people of color and minorities are all obstacles for Muslim Americans seeking help. Roots of hostility against Muslim Americans goes long before 9/11, starting in the early 20th century (Hammer, 2019; Mohamed, 2021) and has been on the rise since the September 11 attacks, amplified by hate speech promoted by political figures and discriminatory proclamations (Abadi, 2015; CDC, 2019; Lipka, 2017; Mohamed, 2021). Muslim men are portrayed as violent and targeted as a threat to the country, while Muslim women are viewed as victims of their religion and Muslim men (Afnan, Rabaan, Jones, & Dombrowski, 2021; Afnan, Zou, Mustafa, Naseem, & Schaub, 2022; Gökarıksel & Smith, 2017; Hammer, 2019). This tense atmosphere affected Muslims nationally, in addition to a general religious misunderstanding and unfamiliarity with spiritual needs by non-Muslims (*e.g.,* Halal food, praying space, multiple meanings of modesty), leads to the discomfort and isolation of Muslim women and delaying intervention until they are desperate (Ghafournia, 2017; Oyewuwo-Gassikia, 2016). To overcome service-seeking obstacles for Muslim women, Islamic organizations dedicated specialized efforts to

countering domestic abuse in the US to tackle the gaps in service provision and address the root causes of domestic abuse (Hammer, 2019). The work of specialized organizations includes direct service agencies providing educational, occupational, and housing services for Muslim women and children (*e.g.,* Muslimat An-Nisa[1], the Domestic Harmony Foundation (DHF)[2], SNS[3]), building empathy and competency nationwide through training social workers and community and religious leaders (*e.g.,* the Peaceful Family Project[4]), and legal organizations aiming to debunk myths and empower women to gain their rights in the United States (*e.g.,* Karama[5]). In this dissertation, I examine issues in mainstream DV service provision as experienced by the American Muslim community and highlight the challenges and opportunities for design to intervene within DV as experienced by Muslim women.

2.2. Theoretical Framing: Domestic Violence in Theory, Islamic Feminism, Power, Resistance, and Agency, and Alternative Justice Theories

In this section, I present contextually relevant domestic violence theories and show how I used theories to articulate the users' contexts, highlight and explain their practices and choices, and inform design implications throughout this dissertation. I resort to Islamic feminism to expand definitions of agency and resistance and design for familiar values. I infer from social work practices and trauma-informed care to account for victim-survivors' needs and support their decision-making. Lastly, I build on

[1] Muslimat Al-Nisaa Shelter. (2018). Retrieved from https://mnisaashelter.org/programs/
[2] Domestic Harmony Foundation. (n.d.). Retrieved from https://dhfny.org/
[3] SNS. (2013). Retrieved November 25, 2019, from http://www.sistersnurturingsisters.org/index.html.
[4] Peaceful families project: Working toward preventing all types of abuse in Muslim families. (n.d.). Retrieved from https://www.peacefulfamilies.org/
[5] Karamah: Muslim Women Lawyers for Human Rights . (n.d.). Retrieved September 15, 2022, from https://karamah.org/

restorative and transformative justice work and introduce a survivor-centered transformative justice approach to expand help-seeking and healing opportunities for victim-survivors.

2.2.1. Domestic Violence in Theory

Within sociology, DV has typically been framed as either an issue of gender (the feminist approach) or as an inevitable expression of family conflict (the family violence perspective) (Dobash & Dobash, 1979; Leit, 2018; Younas, Naseem, & Mustafa, 2020). Other researchers have attempted to provide an integrative framework of intimate partner violence, which considers aspects of both the feminist and family conflict perspectives (Dutton, 2006; Heise, 1998; Lawson, 2012). Researchers have argued that common ground exists between the two dominant theories within this body of work when looking at the causes and treatments of IPV (Heise, 1998; Kurz, 1989). Heise proposes an integrated ecological theory of DV, which synthesizes the body of existing literature to provide a multifactorial perspective that considers both gender and non-gender-related factors of violence. While Hiese acknowledges that gender is an essential component to understanding intimate partner violence, including issues of male dominance within the family and societal gender norms, non-gender related factors, such as an individual's history, personality, and cultural norms are equally important in providing a comprehensive picture of intimate partner violence (Heise 1998). Gelles and colleagues have suggested that social exchange theory and social control theory may help explain why DV occurs; when the rewards for violent behavior may outweigh the cost associated with committing a violent act (David Finkelhor, 1983; Nye, 1979; Richard J Gelles, 1988). In this context, violence occurs when protective laws are unenforced and societal

perceptions of masculinity encourage such behavior (Alhabdan, 2015). I adapt the standpoints of Heise (Heise 1998) and Gelles and colleagues (David Finkelhor, 1983; Nye, 1979; Richard J Gelles, 1988) to understand factors of DV in this sample. Integrative theoretical perspectives allow design researchers to consider the personal, relationship, community, societal, and policy levels to analyze findings and provide an understanding that is transferable to other Western and non-Western contexts. To achieve such understanding, next, I delve into theories of Islamic feminism, power, resistance, agency, and justice in relation to domestic violence.

2.2.2. Islamic Feminism

Mainstream feminism is mostly what evolved from the early 20th century's first and second-wave feminist movements in Europe and America, focused on gender and systems of power and oppression. Underlying mainstream feminism is secularism, and as an academic discipline, it is heavily influenced by modernism and positivism (Asia.; GWAnet; Salem, 2014). Early mainstream feminist theory was critiqued for not attending to issues related to class, race, nationality, or religion. Since then, branches of feminism have evolved to fit different needs and contexts (Crenshaw, 1991; Erete, Israni, & Dillahunt, 2018; GWAnet; Rankin & Thomas, 2019). I use Islamic feminism as an interpretive lens on Muslim perspectives of domestic violence. Though Islamic feminism does not have a universal definition, it is centered around studying gender and systems of power and oppression and social movements working to create more equal rights and opportunities within Islamic contexts. Islamic feminism also became known as a new

interpretation of Islam and gender, based on ijtihad[6], where Islam is viewed as applicable to a feminist frame. Women empowerment happens through continuous reformation and reinterpretation (Barlas, 2019; Davids, 2015; McDonald, 2008; Tønnessen, 2014), using "feminist tools of textual critique to challenge the patriarchal elements in Islamic jurisprudence" (Al Fassi, 2019). In this way, Islamic feminism aims "to dismantle the authority in question by entering the realm of the sacred text and by providing an alternative reading and interpretation until the power of authority is shaken, challenged, and the paradigm is shifted." (Al Fassi 2019). The main dispute between mainstream and Islamic feminists is that mainstream feminism positions some religions as patriarchal (Al Bunni, Millard, & Vass, 2018; McDonald, 2008). Whereas Islamic feminists see Islam in itself promotes social justice and equity and consider the orthodox interpretations of Islamic text and cultural praxis as the sources of patriarchal beliefs (McDonald, 2008; Tønnessen, 2014; Wulf, Misaki, Atam, Randall, & Rohde, 2013). Given that the participants were Muslim, I explain how key concepts within Islamic feminism foreground important issues within in the empirical data and, later, use Islamic feminism to understand domestic abuse issues and design for DV key stakeholders.

When approaching social issues from a feminist viewpoint, we must be cautious of repeating the mistakes of colonial feminists, where racism, othering, and belittling underlies quests for justice (Abu-Lughod, 2008; Abu-Lughod, 1990; Bilge, 2010; Sehlikoglu, 2018), while also being careful of falling into the trap of Oriental feminism which locates differences in an innate ahistorical cultural essence (Abu-Lughod, 2008; Bilge, 2010; Mahmood, 2006). Research focused on the region's cultural, historical, and

[6] *Ijtihad* is the process of independent reasoning of scholars and non-scholars for "the production of social, legal and political frameworks through the interpretation of Islamic texts" (McDonald 2008, Davids 2015, Al Fassi 2019)

political developments, and discursive and practical conditions behind actions while making new interventions legible, will allow designers to refrain from repeating colonial and oriental feminist mistakes (Abu-Lughod, 2002; L. Irani, Vertesi, Dourish, Philip, & Grinter, 2010; Mahmood, 2006). Intervention goes hand in hand with design. Thus, the HCI community must be wary of savior complexes by accepting differences and respecting the different choices people make while understanding why they make them (*e.g.,* accepting different ideas of justice), their histories, and perspectives (Abu-Lughod, 2002; Bilge, 2010; Gautam, Shrestha, & Tatar, 2019; Mahmood, 2006; Wadud, 2013). Also, by being vigilant about staying clear of serving political rather than humanitarian purposes when choosing selective concerns, which sometimes depend on a sense of Western superiority (Abu-Lughod, 2002; Malak, 2019). Non-Western contexts expand HCI literature to recognize and stand against cultural relativism (*i.e.,* deeming complexities as cultural and thus do not require intervention) (Abu-Lughod, 2002; Mahmood, 2006; McDonald, 2008), dismissive universality (*e.g.,* Saudi women are subdued by some laws but are better than others in maternity leave) (Malak 2019), and cultural reductionism (*e.g.,* Muslim women are oppressed because of their uncivilized social and religious rules, whereas the West is civilized and discrimination against women is not systematic but instead interpersonal and racial) (Malak 2019). Dedicated efforts such as the IslamicHCI workshops aim to encourage such conscious research (HCI, 2020; Mustafa, Lazem, et al., 2020; Rifat et al., 2022). In this work, I use the lens of Islamic feminism to construct the theoretical framing and continue to follow the thread of Islamic feminism in the empirical and design implications chapters.

The Islamic Perspective on Domestic Violence

Here, I discuss and present conflicting points in DV definitions and applied rulings and describe processes taken to address marital conflict, all from an Islamic feminist perspective. Addressing issues from an Islamic perspective includes considering the various schools of thought and sects within Islam that may produce different views on a given topic. In each school's jurisprudence, primary and secondary sources are considered as Islamic sources of law. The primary sources are the *Quran* , the Islamic holy text, *Hadith*, a collection of the Prophet Muhammad's sayings, and the *Sunnah*, which describes practices by Prophet Muhammad, various Islamic leaders, and Islamic traditions (Alhabdan, 2015; Hassan, 1984; Meijer, 2010). The secondary sources may differ across sects, which include among others: *Qiyas* (analogical reasoning), *Ijma* (consensus), and the public interest (Alhabdan, 2015; Hassan, 1984; Meijer, 2010). When interpreting and understanding Islamic text, religious scholars argue such texts ought to be analyzed as a whole because teachings cannot be understood in isolation (Abugideiri, 2010). The Islamic ruling on domestic abuse is deduced from several Quranic verses. In the Quranic verse ("…*he created for you mates from among yourselves, so that you may dwell in tranquility with them, and He has put love and mercy between your (hearts)*…")[7], a definition of marriage is presented as a partnership in emotional wellbeing, mutual respect, and harmony (al-Hibri, 2003; Douki, Nacef, Belhadj, Bouasker, & Ghachem, 2003). When marriage is impossible to continue, a whole chapter in the Quran is dedicated to the decency of divorce, where Muslims are guided to end the

[7] (Quran, 30:21)

marriage with no harm[8] (Douki et al., 2003). In the words of the Prophet Muhammad: ("*The most perfect believers are the best in conduct. And the best of you are those who are best to their wives*") and ("*It is the generous (in character) who is good to women, and it is the wicked who insults them*") he discouraged abuse and blatantly critiqued abusers (Douki et al., 2003). In other instances, Muhammad stressed the importance of kindness towards women and "equated the violation of their marital rights to a breach of the couple's covenant with God" (Meijer, 2010). Prophet Muhammad was reported never to have disrespected, insulted, or aggressively treated his wives, women of his family, nor strangers (al-Hibri, 2003; Douki et al., 2003). More so, interpreted from the concept of *darar* or harm, which is forbidden in Islamic law (Muda, Mohd, & Hashim, 2017; Yelwa & Zin, 2016), domestic abuse is prohibited given that harm and abusive behavior contradicts Islam's jurisprudence (al-Hibri, 2003; N. H. Ammar, 2007; Meijer, 2010; Wadud, 1999). While there are common unifying beliefs and rituals among Muslims, like most religions, there are diverse schools that influence how domestic abuse is viewed (N. H. Ammar, 2007). One example is the verse known as the "chastisement passage" (al-Hibri, 2003), which appears to permit husbands to scold their wives and is used by religious scholars to promote the right to hit wives (al-Hibri, 2003; N. H. Ammar, 2007; Douki et al., 2003). Scholars' different interpretations ranged from actual hitting, restricting hitting not to touching the face, not leaving bruising or marks, being as gentle as using a handkerchief, leaving rather than violence, and seeking reconciliation through taking time to reflect, with the specific purpose of restoring marital harmony (al-Hibri, 2003; M. Alkhateeb, 2012; N. H. Ammar, 2007). Islamic feminists conclude that the

[8] Based on the verse " (When you divorce women, and they reach their prescribed term, then retain them in kindness and retain them not for injury") (Quran, 2:231))

common thread among Quranic texts on spousal relations is centered around respect, reconciliation, and justice (al-Hibri, 2003; N. H. Ammar, 2007; Douki et al., 2003; Meijer, 2010). However, there are outlying messages that are subject to a range of interpretations and are specific to historical times that may not be applicable today (al-Hibri, 2003; N. H. Ammar, 2007; Douki et al., 2003; Salem, 2013, 2014).

Agency within marriage can be explicated in the way in Islam views marriage; as a contract between the sexes rather than a sacrament (Booley, 2014). The marital contract "solemnizes the physical connection between a man and woman, and serves as the foundation for their marriage" (M. Alkhateeb, 2012). Within Islamic marriage contracts, women can negotiate clauses to include in the marital contract, which the couple agreed on and signed before two witnesses (M. Alkhateeb, 2012). If clauses are violated, she has the right to end the marriage contract through a divorce. Islamic marital contracts encourage protecting one's rights and wellbeing; thus, scholars use marital contracts as evidence in support of women's agency, particularly when the marital union becomes intolerable (M. Alkhateeb, 2012; Booley, 2014; Fortier, 2012). Married women also have the right to divorce through *Khul',* where the provision for divorce is at the instance of the wife, requiring her to return her *mahr* (bridewealth or marital gift) (M. Alkhateeb, 2012; Booley, 2014; Fortier, 2012). Historically, women often consulted or sought mediation from influential society members and leaders to resolve marital conflict. A Quranic chapter, along with other verses, are believed to be revealed exclusively to address women's needs (Hamdan, 2019). Sayings of the Prophet recalling reconciliation and mediation stories among couples signify speaking against mistreatment and encourage intervention-seeking (Hamdan, 2019; Malik & Muda, 2015). Beyond mediation,

protesting events were mentioned where women were publicly expressing their stance through reason and using religious text to support their rationale (Ordoni, 2014). Islam encourages resistive expressions of agency by holding its followers responsible for speaking against injustice and doing what is possible to end forms of oppression[9], aligning with feminist perspectives (Institute, n.d.). Thus, agency in its means of mediation and intervention-seeking, protesting, and calling out injustice are all within the norms of Islam (Hamdan, 2019; Malik & Muda, 2015; Ordoni, 2014).

Muslim states and clerics use the same religious texts to incite discriminatory and abusive practices against women (Barlas, 2019). Therefore, efforts to undo harmful interpretations are particularly significant for meaningful social change, and "even though a Quranic hermeneutics cannot by itself put an end to patriarchal, authoritarian, and undemocratic regimes and practices, it nonetheless remains crucial due to the existential relationship between how we understand texts and 'how we think about and treat real women'" (Barlas, 2019). This work's foundation is based on these Islamic perspectives that object DV and validate resistance against injustice, which I build off to emphasize understanding and designing for agency within an Islamic space of intervention.

2.2.3. Power, Resistance, and Agency within DV

I review the meaning of power and how agency and resistance are shaped by threats of power within DV contexts to explain the participants' practices from a culturally informed perspective. By focusing on agency, I view participants as active agents rather than passive victims accepting unbalanced cultural and systematic laws

[9] Examples of Quranic verses against injustice include (Quran, 5:8 and 42:42-43).

(Nolet et al., 2021). Concepts are discussed from an Islamic feminist lens, which fits this context and my academic views.

Domestic violence often stems from unbalanced power relations within society. Power is a socialized and embodied phenomenon that shapes individuals' subjectivity (*i.e.,* who they are as a person, their values, preferences, opinions, and personality) and agency (*i.e.,* their ability to make life decisions) (Rutar, 2017). In this way, power is a social relation rather than only a legal one focused on hegemonic powers within society (Rutar, 2017). Within domestic violence cases, abusers' interaction with their partners and families constructs and maintains the power that reinforces their status and influence as head of the household. Simultaneously, such actions define and regulate the status and actions of other household members (Westlund, 1999). Abusers' common strategy is forced isolation and emotional and economic abuse, making it extremely difficult for a victim to break free (Nolet et al., 2021; Westlund, 1999).

Resistance is a contentious term in feminist literature (Abu-Lughod, 1990; Bilge, 2010; Mahmood, 2006; Sehlikoglu, 2018) and has often been biased by romanticism, resulting in weak analysis of structural inequalities that create, perpetuate, or benefit from oppressive situations (Abu-Lughod, 1990). To overcome this bias, Islamic feminist scholars suggest using resistance as a diagnostic of power relations and structures (Abu-Lughod 1990, p.42), and view resistance and agency as interrelated (Bilge, 2010; Mahmood, 2006). Women's agency is viewed differently across various feminist scholarship, from being the patriarchy's submissive victims (lacking agency) to being active agents resisting or subverting male domination (Mahmood 2006, p.38) (Bilge 2010). Islamic feminists found such agency conceptions to be limited and problematic,

preferring an expanded definition of agency not only about a person's capacity nor only about resistance (Mahmood 2006, p38)(Bilge 2010). Agency is about how societal, economic, and political structures create and reinforce conditions that underpin cultural norms, possibilities, and oppression around gender, including non-resisting shapes of agency (Mahmood 2006, p38)(Bilge 2010).

Moreover, social norms can only be undone and destabilized through reiterations of norms, "agency resides, therefore, within this productive reiterability" (Mahmood 2006, p.46,47). In my analysis, I adopt the Islamic feminist agency definition and define resistance as any mental or behavioral act that opposes any form of violence, oppression, or conditions that enable oppression (Wade, 1997). The extent of resistance depends on the situation's unique combination of dangers and opportunities, the victim's perceptions of risk and the effectiveness of the resistance, energy, level of dissonance between her preferred identity—constructed by culture and personal and family experiences—and her situational experience, and, most importantly, the availability and effectiveness of external support and services (M. Allen, 2011; Wade, 1997).

I acknowledge the frame of problem-solving and offering fixes to social problems is familiar to the HCI community and has been faulted by several scholars (Baumer & Silberman, 2011; Lindtner, Bardzell, & Bardzell, 2018a). An Islamic feminist approach provides guidelines on how to design within this context of entangled political and cultural norms around abuse rather than demolish it. Concurrently, I do not seek to Orientalize participants' experiences; rather, I focus on the practical conditions that make up their desires and ethics by emphasizing the significance of the historical and cultural context of Saudi Arabia and the United States.

2.2.4. Alternative Theories of Justice

The rise of alternative forms of justice, notably restorative and transformative justice, attempts to replace or reduce reliance on a criminal justice system (CJS) that is heavily punitive rather than rehabilitative towards offenders and disproportionately and deleteriously affects people of color and marginalized populations (Drost et al., 2015; Mimi E Kim, 2021; Nocella & Anthony, 2011; Stubbs, 2002). Restorative justice (RJ) is an approach to addressing crime by involving the affected community members in identifying and addressing harm and promoting healing collectively away from the CJS (Mimi E Kim, 2021; Xiao, Cheshire, & Salehi, 2022; Zehr, 2015). Transformative justice (TJ) attends to harm inflicted on community members while concurrently addressing broader systemic and social factors that enable harm to occur (Asad, 2019; Chordia, 2022; Coker, 2002; Five, 2007; Nocella & Anthony, 2011). While RJ and TJ do not have singular agreed-upon definitions, both shift harm from the individual to the collective in responses and repair and are mainly distinct in their relationship with the criminal legal system. Restorative justice is intended as a replacement for the CJS and overlooks structural causes of harm (Mimi E Kim, 2021), which critics see as leaving the CJS and its harmful issues intact (*e.g.,* racism, Islamophobia) (Coker, 2002; Mimi E Kim, 2021). Whereas transformative justice actively criticizes systemic injustices contributing to harm, encourages the average person to participate in its liberatory vision of justice, and "renders the intervention of violence and its prevention as an everyday democratic act" (Mimi E Kim, 2021).

Applying such theories differs based on context, and conflicts surface when using them for domestic abuse. Restorative Justice has been mainly practiced and tested on incident-based harm between victim(s) and offender(s) who are not well-known to each

other (*e.g.,* juvenile justice). In contrast, domestic violence concerns repeated and intentional tactics, acts of control, and "strategies that attempt to implement gender ideologies" (Stubbs, 2002) between intimates or family members. Treating DV as incidents of discrete violent episodes narrows DV to individual harm, ignoring the social and political context and dismissing the abuser's deeply held attitudes and beliefs around gender and power (Mimi E Kim, 2021; Stubbs, 2002). Transformative justice theorists view the offender as a conscious choice maker, and community norms as non-neutral and rather shaped by structures, potentially harmful for DV victim-survivors (Mimi E Kim, 2021). For example, research has shown that "people often fail to condemn non-violent controlling behaviours such as threats to take children, control of money, isolation of the woman, and extreme jealousy" (Coker, 2002). Another issue identified within RJ literature when dealing with domestic gendered violence, is its emphasis on ending the offense by focusing on apology and reparation through RJ's conferencing process, which involves the victim-survivor, abuser, their supporters, and a facilitator to develop a harm-repairing resolution (Coker, 2002). Such focus dismisses knowledge that abusers commonly use apology to manipulate their victims and others (Stubbs, 2002). Conferencing may also expose the victim-survivor to further harm through interacting with the abuser or the pressure to comply with what the community wants rather than her needs (Coker, 2002; Islam, Suzuki, Mazumder, & Ibrahim, 2018). Further, the act of restoration assumes there existed a state of non-harm for both the victim and abuser, which in DV within marginalized communities is not always the case (*e.g.,* victim-survivors and perpetrators face systemic harm and trauma requiring comprehensive healing) (Coker, 2002). Though TJ processes and practices are currently less defined

compared to RJ, TJ aims to transform and create communities that support women's autonomy and allows the opportunity to acknowledge the influencing systems of oppression, however, does not excuse violent behavior (Coker, 2002). In the case of US-based Muslims, racism and Islamophobia are rampant systematically, resulting in economic and social disadvantages, among other consequences. Faith leaders who are front-line responders to DV cases within their communities can use their religious status to support patriarchal practices and justify abusive behaviors (Hammer, 2019; Islam et al., 2018). Thus, to transform the Muslim-American woman's experience, collective trauma needs to be healed and religious institutions must develop proper training and prioritize resources to deal with domestic violence within their community effectively.

Implementing alternative justice models to different contexts is complex; idealized views of RJ strictly involving community members and practices away from the CJS, or of TJ in its pure abolitionist form without giving grace to the current changes and structural benefits for victim-survivors can result in rigidity, and the decentering of victims (Mimi E Kim, 2021). A dilemma lies in balancing acting upon DV as a civil rights issue while avoiding state control of marginalized individuals and communities on the one hand and relying on community praxis for victim-survivors' justice while protecting them against norms and members enabling the abuse (Coker, 2002; Mimi E Kim, 2021; Stubbs, 2002). As a result, RJ has been limitedly used in the US for DV, rather, an evolving process of justice has been promoted, combining both approaches where RJ's community engagement values have been integrated within some TJ movements (Mimi E Kim, 2021).

Defining Survivor-Centered Transformative Justice

I introduce and adapt a Survivor-Centered Transformative Justice approach, which uses complementary tenets from restorative and transformative justice. These tenets include: 1) to center victim-survivor's agency within current structures (Coker, 2002; Stubbs, 2002); 2) to encourage taking into account RJ's insights on the importance of social networks in restraining offenses and caring for victim-survivors and their needs (Coker, 2002; Xiao et al., 2022); 3) lastly, to address DV as a structural, social, and political issue which requires a multi-dimensional collective approach, using a critical and rehabilitative lens to control harm and build better futures, and capitalizing on the benefits of the victim-survivor's choices (Coker, 2002; Mimi E Kim, 2021; Stubbs, 2002). Throughout this dissertation, for simplicity, I use the acronym SCTJ to refer to survivor-centered transformative justice.

2.3. Social Work Overview and Trauma-Informed Care

2.3.1. Social Work Overview

When examining social problems, I find social work practice and values to align strongly with HCI and view both fields as allies; social work in its ways of providing well-established practical knowledge to apply to social contexts and theories that can guide design, and HCI in supplementing interventions with an in-depth understanding and vision of technology's role and impact on interventions. Social work, at its core, values integrity and challenging injustice and is focused on individuals and society's wellbeing as a whole. Social work practice is generally divided into three scopes: micro, on an individual or family level (*e.g.,* counseling); mezzo, on an intermediate level (*e.g.,* involving small groups, neighborhoods, and institutions); and macro, which covers

research, education, program development, and policy analysis and advocacy (SWLM, 2020). Social work DV treatment strategies, aim to empower the victim and help them survive; by offering support, identifying and focusing on their strengths, and providing information regarding resources and services. Services provided for domestic violence survivors in the US include shelters, counseling, linking survivors with resources, education and job training, and legal assistance, establishing a plan of action, and advocating on the survivor's behalf with legal, medical, and social services (Kirst-Ashman, 2009). Social workers are at the forefront of serving marginalized and vulnerable populations' immediate needs individually and across institutions, providing research and education, and advocating for social change and political action (NASW, 2017). In the social work Code of Ethics—which sets "basic values, ethical principles, and ethical standards to guide social works' conduct" (NASW, 2017)—social workers are urged to be culturally aware and competent and work against discrimination in all forms, including based on race, religion, and immigration status (Congress & Gonzalez, 2012; NASW, 2017). Cultural awareness is defined as "an understanding that an individual has different cultures, defined as races, religions, gender, ages, and physical disabilities" (Congress & Gonzalez, 2012). In contrast, cultural competence is "understanding culture and its function in human behavior and society, having a knowledge base about their [social workers] clients' culture, demonstrating competence in the provision of services that are sensitive to clients' culture and differences among people and cultural groups, and understanding cultural diversity and oppression" (Congress & Gonzalez, 2012). Social work and HCI have several key shared commitments, making social work a well-suited discipline for HCI to draw and learn

from. HCI focuses on the user's needs; understanding how people use technology, the impacts of technology on its users, and the ecosystem surrounding its users (Rogers, 2012). Specifically, contemporary HCI is focused on human values and being socially conscious and responsible in research and design, and committed to change, equity, justice, and refraining from harm (Asad, 2019; Bardzell, 2010; Chancellor et al., 2019; Costanza-Chock, 2018; Friedman, Hendry, & Borning, 2017; Harrington, Erete, & Piper, 2019; Lynn Dombrowski et al., 2016; Rogers, 2012). I see the need for the HCI community to make use of social work's wealth of knowledge and further engage in an interdisciplinary relationship and sustainable collaboration to build more robust interventions, support accountability and credibility within HCI, and provide a space for creative solutions in tackling social issues.

2.3.2. Trauma-Informed Care

To serve the needs of survivors, I find it necessary to combine trauma-informed approaches within the survivor-centered transformative justice model to support a holistic culture of healing. An effective approach to healing used with DV survivors is Trauma-Informed Care (TIC); an approach that responds directly to the effects of trauma and "emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment" (Center, 2015; Protocol, 2014). In a DV context, TIC attributes are centered around promoting emotional safety, restoring choice and control, facilitating connection, supporting coping, responding to identity and context, and building survivors' strengths (Center, 2015). Trauma-informed care attributes helped inform this research by understanding current and past injustices and trauma responses as part of the

DV experience and prioritizing survivors to tell their own stories (Center, 2015; NCDVTMH, 2011), and informed the design process by attuning to the attributes mentioned, for example, part of promoting emotional safety is to minimize triggers environmentally by proving a calm and homey feel and ensuring safety and security through design.

2.4. HCI, Gender-based Violence, and Social Justice

The field of Human-Computer Interaction (HCI), particularly in its third wave, places a strong emphasis on inclusivity and human values, recognizing that emerging technologies have become integral to our everyday existence (Alsheikh, Rode, & Lindley, 2011; Filimowicz & Tzankova, 2018). At the forefront of values are justice and equality. In this section, I highlight HCI research related to gender-based violence and social justice while also contextualizing the contributions this dissertation makes to the HCI field.

2.4.2. Gender-based Violence in HCI

Gender-based violence has been studied broadly within HCI (Ndjibu, Peters, Winschiers-Theophilus, & Namhunya, 2017). Specifically, domestic violence (DV) or Intimate Partner Violence (IPV) has been addressed by multiple scholars from the perspectives of: the role of technology in the US IPV ecosystem (Freed et al., 2017), DV service provision and prevention (Bellini, Forrest, Westmarland, Jackson, & Smeddinck, 2020; Bellini, Forrest, Westmarland, & Smeddinck, 2020; Bellini, Strohmayer, Olivier, & Crivellaro, 2019; Ndjibu et al., 2017), technology exploitation for abuse (Bellini et al., 2021; Freed et al., 2019; Freed et al., 2018; Leitão, 2019; Tseng et al., 2022), agency

practices addressing DV (Rabaan et al., 2021), designing within patriarchal systems (Sultana, Guimbretiere, Sengers, & Dell, 2018), survivors' security, privacy, and safety (Arief, Coopamootoo, Emms, & Moorsel, 2014; Dieterle, 2015; Havron et al., 2019; Tseng et al., 2022), and life-repair after DV (Clarke, Wright, Balaam, & McCarthy, 2013). The HCI community has started focusing on technology's role in both alleviating and aggravating abuse. HCI research found technology often operates as a double-edged sword, providing moral support and accessibility to economic opportunities for DV survivors (Clarke et al., 2013) and protection through alerting or connecting survivors with authorities, NGOs, lawyers, and hospitals (Ismail & Kumar, 2019; Karusala, Bhalla, & Kumar, 2019). Simultaneously, technology exposed survivors to greater vulnerability to stalking and harassment (Bellini, 2023; Dimond, Dye, Larose, & Bruckman, 2013; Freed et al., 2017, 2018; Lindtner et al., 2018a; Woodlock, 2016). To address concerns of harassment through technology, research in this area has focused on ways to design systems that balance the survivor's privacy, usability, and accountability (Arief et al., 2014; Matthews et al., 2017), security (Matthews et al., 2017), and agency (Gautam et al., 2019; Sterling, 2013). Scholars also explored supporting DV service providers (Bellini et al., 2019), and the perpetrator's responsibility (Bellini, Forrest, Westmarland, & Smeddinck, 2020) and agency (Bellini, Forrest, Westmarland, Jackson, et al., 2020) through design. ICTD and HCI4D scholarship expanded the view of gender violence and technology. Scholars extensively studied countering public harassment through technology in the Global South (Ahmed et al., 2014; Blom et al., 2010; Karusala & Kumar, 2017; Sambasivan et al., 2019; Sarosh, Yousaf, Javed, & Shahid, 2016; Sterling, 2013). The research examined sexual harassment in urban Bangladesh and delivered and

evaluated a platform to report, map, and share women's stories on harassment (Ahmed et al., 2014). Scholars assessed the appropriateness of a panic button mandated by the Indian government for women's public safety (Karusala & Kumar, 2017), examined online abuse experiences, consequences, and online coping practices (Sambasivan et al., 2019), designed for behavioral strategies towards fear (Blom et al., 2010), and supported women using public transportation (Sarosh et al., 2016). Further, scholars examined patriarchal contexts concerning women's privacy (Karusala et al., 2019), relationships (Alsheikh et al., 2011), support-seeking (Karusala et al., 2019), maternal health (Mustafa, Batool, et al., 2020), and their inclusion and usage of different technologies and platforms (Ibtasam et al., 2019; Ismail & Kumar, 2019). Particularly relevant to this research is a study by Sultana et al (2018), proposing empowering women within their societal structures, enabling situated actions by supporting relationships in place, and designing beyond the user to include people and systems that influence the user (Sultana et al., 2018). Also, Alsheikh et al., introduced applying Islamic feminist theories to inform value-sensitive design within non-Western contexts (Alsheikh et al., 2011). Such scholarship informs this work by providing culturally situated analyses of underrepresented populations in HCI. We expand upon this research by adapting a comprehensive Islamic feminist lens to data analysis and design (Rabaan & Dombrowski, 2022; Rabaan et al., 2021).

Currently, most HCI research that focuses on issues of domestic abuse is in Western contexts. Notable exceptions include Bangladesh and Brazil (Gautam et al., 2019; Silveira, dos Santos, & da Maia, 2018; Sultana et al., 2018). Further, scholars have shown their concern about conventional technological and non-technological approaches

that tend to burden the survivor with coping and healing while excluding abusers from the process (Bellini, Forrest, Westmarland, & Smeddinck, 2020; Leit, 2018). An exception is the recent work of Bellini et al. (2020), situated in a third-sector organization in the UK, where they aim to challenge and change the perpetrator's behavior through design. Their work is focused on preventing abusive behavior by encouraging perpetrators to be self-aware, acknowledge the extent of harm done, provide support, and respect authority (Bellini, Forrest, Westmarland, & Smeddinck, 2020). The gist of Bellini et al. (2020)'s work is around designing for responsibility, where technology is leveraged to encourage the development of non-abusive practices, which comply with the values of TJ and RJ (Coker, 2002; Islam et al., 2018; Nocella & Anthony, 2011).

Scholarship of HCI and DV remains in its infancy and primarily within Western contexts. This work examines the role of technology in domestic abuse in Saudi Arabia and a minority in the US. I contribute by accounting for agency in designing for women in Arab and Muslim contexts. I extend the DV ecosystem to include faith leaders and their liaisons, male allies, and community members, identify American Muslims' challenges when seeking DV services, and illustrate technological interventions inspired by social work practices and social justice theories and models. Lastly, I build on the work of violence against women and social justice in the private sphere (i.e., within the home) of a non-Western context, agency, and resistance in HCI by exploring sociotechnical practices women employed to minimize gender imbalance, regain their autonomy, increase their educational and economic opportunities and social participation, and maintain their wellbeing. Further, I broaden the scope of intervention to promote advocacy, accountability, and change on a community and systemic level.

2.4.3. Social Justice in HCI

The field of HCI, specifically in its third wave, emphasizes inclusivity and human values as emerging technologies become inseparable from our daily lives (Filimowicz & Tzankova, 2018). At the forefront of values are justice and equality. HCI scholars have proposed justice theories to tackle social platforms moderation (Im et al., 2021; Schoenebeck, Haimson, & Nakamura, 2020; Xiao et al., 2022), community safety (Chordia, 2022), community-based collaborations (Asad, 2019), computing participation of Black and Latina girls (Erete et al., 2021), and child sexual abuse (Sultana et al., 2022). The Prefigurative Design framework is theoretically relevant to this work, which Asad presents as "a tool to articulate a vision with community partners to better identify opportunities to leverage existing justice work through research intervention" (Asad, 2019). Prefigurative design embraces principles of research justice and transformative justice, focusing on enabling healing within the community. Whereas empirically relevant is the work of scholars Sultana et al. (2022) that presents TJ values through design by prototyping a child sexual assault reporting tool in Bangladesh, where they aimed to include the community and work on changing root causes of child abuse through educating guardians and bringing awareness to the community (Sultana et al., 2022). Sultana et al. argue that social change through sociotechnical system design needs to adopt local morals and values and interventions to include the broader community rather than burdening the victim-survivors of abuse. Thus far, alternative justice models in HCI have primarily focused on issues in the public sphere (*e.g.,* sexual harassment on social media platforms). In this work, I extend HCI scholarship by contending with assault done privately and repeatedly, making it all the more difficult to address. I contribute to HCI by providing a theoretical and design guide to using SCTJ in the

context of harm within an underrepresented community, I highlight the systemic and social conditions enabling abuse, the abusive behavior, and the consequences of abuse on the victim-survivors and the their communities, in the US and Saudi Arabia, and provide interventions that alter, repair, and reduce harm within different scales of relationships. Lastly, I introduce the concept of healing structures, where justice mechanisms are implemented *within* existing structures (as opposed to counter-structures) (Asad, 2019; Dickinson et al., 2021; Mimi E Kim, 2021) to protect against harmful community practices and discriminatory practices and laws and promote healing through collective and survivor-centered interventions.

Chapter Three: Methods

Positionality statement: Domestic violence is a sensitive topic, and Islamic feminism and, more generally, feminism can be contentious topics (Abu-Lughod, 2008; Abu-Lughod, 2002; Mahmood, 2006). To avoid colonialism, Orientalism, and cultural relativism (Abu-Lughod, 2008; Abu-Lughod, 2002; Malak, 2019; McDonald, 2008), and to refrain from generally "othering" the population studied, I follow Abu-Lughod's strategy in textually representing participants' experiences by focusing on connections and interconnections between the community and the researcher (Abu-Lughod, 2008). I identify as a Muslim woman of Saudi Arabian descent. I resided in both Saudi Arabia and the United States for many years during my childhood and adulthood. I am familiar with the Muslim community's religious doctrines and practices and Islamic Feminism. Further, this work is a product of collaborative thought-building with committee members who are adept in alternative justice theories and approaches and the Muslim community. Also, I attribute certain aspects of the theoretical development in this work to the discussions I had with expert peer reviewers.

In this three-phase research, I conducted case studies using qualitative and design methods to examine and design for different facets of domestic violence-related challenges and interventions. In the first phase, I conducted semi-structured interviews with Saudi women who resided in the US and Saudi Arabia, inquiring about their domestic safety concerns and the role of technology in addressing those concerns. This study enabled me to empirically understand nuanced forms of domestic violence, sociotechnical agency practices, and different depictions of justice. In addition, I used this case study to adapt a comprehensive Islamic feminist approach to HCI.

In the second phase, I expanded the previous scope of research to account for US-based Muslim survivors who undergo different types of marginalization. Through participatory interviews with survivors, organizational leaders, and community leaders, I examined victim-survivors' challenges during their help-seeking and recovery from domestic violence. This study allowed me to further understand the DV ecosystem and dynamics within US Muslim communities, and augment DV as a social, political, and systemic issue rather than incident-based misdemeanors.

In the third and last phase, I focused on understanding the ins and outs of advocacy and accountability justice processes implemented by advocates, service providers, and community leaders, their efficacy in achieving survivor justice, and how to co-translate justice attributes into design. I conducted virtual focus groups with multiple stakeholders and produced design concepts based on the focus groups' outcomes. I evaluated the design concepts through semi-structured user testing sessions with expert participants.

This dissertation represents the culmination of the aforementioned qualitative and design methodologies, enabling me to diligently address the needs of my user base and develop a profound comprehension of the intricacies surrounding domestic violence. Moreover, the chosen methods yielded valuable insights on approaching social issues in design with empathy. In the concluding chapters, I demonstrate such insights can inform design research from several aspects. Subsequently, I elaborate on each research phase.

3.1. Phase 1: Exploring Saudi Women's Sociotechnical Agency Practices in Addressing Domestic Abuse

3.1.1. Approach, Participants, and Data Collection (Phase 1)

In this research, I used semi-structured interviews with seventeen Saudi women on their domestic violence concerns. The interview invitation was not overt and rather general by mentioning (safety concerns in the home for Arab women) as the focus of the interviews, rather than domestic abuse. I foreground safety concerns to broaden the experiences discussed, avoid boxing the definition of domestic abuse to physical violence, and increase study participation. During the study, the sociopolitical climate was charged around the guardianship topic, possibly resulting in lower participation. Indeed, at least two women declined, showing suspicion or hesitance to participate.

The participants are Saudi women who were either living in KSA or in the United States. Given I resided in the US, I had more access to local Saudi. Most Saudis in the United States were temporary residents as students on governmental scholarships. Thus, I decided to recruit from both countries to avoid any anticipated homogeneity amongst participants and include broader experiences. Participants in the US were recruited through a WhatsApp group for the female members of the university's Saudi Student Association. Snowball sampling (Goodman, 1961) was then used to identify other Saudi women in the United States. Participants in Saudi Arabia were recruited through my social network and snowball sampling using email, Facebook Messenger, and WhatsApp invitations. The interviewees consisted of ten participants in the United States and seven in Saudi Arabia. Their ages ranged from 21 to 35 years, with a median of 29 years (further details are listed in Table 1). I did not collect full names or other identifying information to protect their identities. Interviews lasted between 24 and 107 minutes,

averaging 50 minutes per interview. Seven interviews were conducted face-to-face, one by instant voice messaging, and nine by video or audio calls. All interviews were audio-recorded in Arabic, English, or a combination of both languages, and securely saved on the university server. Participants received a 20.00 USD international Visa card for their participation in the study.

Table 1: Phase 1 Participants' Demographics.

Participant ID	Age	Occupation	Location
P01	22	Student	United States
P02	35	Student	United States
P03	24	Student	United States
P04	21	Student	United States
P05	22	Housewife	United States
P06	32	Housewife	Riyadh, KSA
P07	23	Operation Specialist	Riyadh, KSA
P08	32	Student	United States
P09	25	Housewife	United States
P10	29	Karate Trainer	Khobar/Riyadh, KSA
P11	23	Student	United States
P12	29	Housewife	Jeddah, KSA
P13	30	Anesthesiologist	*Khobar/Bahrain, KSA*
P14	33	Administrative Assistant	Riyadh, KSA
P15	32	Student	United States
P16	30	Administrator	Makkah, KSA
P17	33	Nurse Practitioner	United States

I interviewed each participant using a semi-structured approach in the language of their preference. I had two versions of the interview invitation, information sheet, and guide, each one in Arabic and another in English. Participants were asked to share their experiences, or the experiences of someone they knew, to discuss how they navigated domestic safety concerns. Questions were formed gradually around DV scenarios, starting with economic abuse cases (*e.g.,* hindering education and career opportunities),

safety, fleeing abusive households, and finally, physical abuse. Specifically, participants were asked about their experiences as women in the Arab world, their various domestic safety concerns and how they dealt with them, the role of technology in response to those concerns, and their aspirations for an ideal environment for women. The interviews allowed me to understand how Saudi women defined, viewed, and experienced domestic violence, their practices and the role of technology in response to domestic violence.

3.1.2. Data Analysis (Phase 1)

The data was inductively and deductively analyzed (Strauss & Corbin, 1997) and coded to generate initial themes around abuse, resistance, intervention, cultural practices, gender, and opposition. The further iterative analysis focused on specific forms of abuse, resistive and non-resistive agency expressions in response to the abuse, and technical tools used in their practices and expressions. All interviews were transcribed in their original language, where the ones transcribed in Arabic were later translated to English. IRB approval was obtained prior to conducting the study.

Limitations: Due to the sensitivity of the topic, I had difficulty recruiting people from noticeably diverse socioeconomic backgrounds. Consequently, the women interviewed in this study were largely from well-educated, middle-class families. Therefore, it is possible that participants were from families that held progressive views on women, granting them more opportunities and protections than those from more conservative backgrounds. Additionally, none of the participants used or personally knew someone who used social media to seek help from others publicly.

At the time of this research, Saudi Arabia was undergoing a series of reforms, some of which happened before data collection (*i.e.,* women's right to drive), while others

happened after (*i.e.,* changes to the guardianship law) (Watch, 2019). Notable policy changes made following data collection were on civil status, travel documents, and labor laws. Specifically, non-married women have been removed from the definition of minors, allowing women over 21 to obtain a passport and travel without a guardian's permission, and assume the head of the household when separated or widowed (Malak, 2019). These reforms reflected a growing sense of optimism among participants toward the future of Saudi Arabia for women. Changes could influence cultural norms and the situation for women in the country, providing greater autonomy and possibly impacting findings related to economic or social abuse.

3.2. Phase 2: Challenges in Help-Seeking for Muslim DV Victim-Survivors

To follow up on the previous study, I endeavored to understand further how technology aided in survivors' help-seeking process in the United States. Initially, I examined available DV mobile applications, categorized their purpose and features, and tested features of one-to-two applications with two participants, a Muslim DV survivor and advocate and a social worker in the Midwest. The intention was to see if professionals and survivors used DV computing tools and if they were inclusive of cultural-specific needs (*e.g.,* language, representation, spiritual content). Realizing there were gaps in use and the tools' design inclusivity and representation, among other issues, I pivoted to a full study looking at the core issues Muslim survivors in the US faced in DV situations (Rabaan & Dombrowski, 2023).

3.2.1. Participants (Phase 2)

I purposely sought out multiple opposing viewpoints through virtual semi-structured participatory design interviews. Sessions were held virtually due to the

COVID-19 pandemic. Participants included survivors, social workers, and mosque representatives to help situate Muslim women's DV experiences and their challenges in the US by the stakeholder groups directly involved (Costanza-Chock, 2018). I focused on recruiting social workers who worked at cultural-based nonprofits that attended to Muslim needs among other ethnicities and religions.

I interviewed 23 participants; 14 were service providers who worked with culturally-based DV countering agencies, five Muslim-identifying DV survivors, four imams (*i.e.,* faith leaders), and two mosque liaisons, who are mosque-designated persons of contact specifically for female attendees. The service providers' experiences included CEOs, senior program directors, and case managers, some with over 30 years of experience. One imam was a woman, and at least four of the participants identified as survivors while serving as service providers, community leaders, or advocates (further details listed in Table 2: Phase 2 Participants' Demographics.). The participants' diverse backgrounds and the plurality of experiences allowed for a deeper understanding of survivors' personal, organizational, and systemic challenges.

Table 2: Phase 2 Participants' Demographics.

Session#	Participant ID	Sex	Occupation-Experience
1	P01	F	Director / Survivor
2	P02, P03	F, F	Counselors
3	P04	F	Executive Director
4	P05	F	Program Manager
5	P06	F	Survivor
6	P07	F	Case Manager
7	P08	F	DV Advocate
8	P09	F	Nonprofit CEO
9	P10	F	Nonprofit President
10	P11	F	Senior Director
11	P12	F	Director

12	P13	F	Social Worker
13	P14	F	Survivor
14	P15, P16	M, F	Imam, Mosque Liaison
15	P17	M	Imam
16	P18	M	Imam
17	P19	F	Mosque Liaison / Survivor / Advocacy Trainer
18	P20	F	Survivor
19	P21	F	Survivor / Advocacy Trainee
20	P22	F	Survivor
21	P23	F	Imam / Survivor

3.2.2. Recruitment (Phase 2)

The recruitment process started with collecting an exhaustive list of national organizations focused on the Muslim community in the US. Overall, I contacted over 80 points of contact, either directly emailed, messaged through their websites, or reached out to on their social media pages. The second recruitment strategy was to post on relevant social media groups. Lastly, I tapped into my personal and professional network and the participants' referrals for snowball sampling (Goodman, 1961). Survivors were compensated with a $20 gift card as a form of incentive, appreciation for their time, and sharing their personal experiences. Recruiting and interviewing survivors required flexibility; for example, one survivor could only talk on the phone while walking outside the house after her husband left for work and her kids were at school. I stopped recruiting service providers after reaching saturation (Fusch, 2015), and for imams and survivors after finding resonant themes across the conversations.

3.2.3. Participatory Design Interviews (Phase 2)

I conducted all the interviews, which all were in English. The interview protocols differed based on the participants' expertise and experience; I had three protocols slightly

modified for DV professionals, survivors, and community leaders. The overarching focus of the study, as communicated to the participants and approved by the IRB committee, was to identify the gaps and challenges Muslim DV survivors faced within US-based mainstream service provision. Each interview was divided into two parts. The first part empirically investigated the roles participants took in the community, their experience with DV, the critical challenges survivors faced when responding to DV, the use of technology in their daily practice related to DV, and the challenges they faced using technology. The second part of the interview was participatory-based, continuing to build on answers from the first half. Interviewees were prompted to envision "magical" social, ubiquitous, or mobile technologies that would help overcome the challenges they mentioned in the first half of the interview. Participants were encouraged to use a pen and paper to express their suggestions visually and given the option to think aloud or write on a piece of paper. Most participants were most comfortable vocally expressing their interventions, some wrote lists of ideas, and only one participant used a tablet to sketch a design, emulating an exercise she did during a course on technology for innovative solutions as part of her master's in social work.

3.2.4. Data Analysis (Phase 2)

The data analysis process happened over an extended period. The first round of analysis was conducted in 2021 and focused on identifying the challenges Muslim women face in mainstream services, barriers within their immediate communities, and how to address the challenges through technical and non-technical interventions. The data were inductively and deductively analyzed (Strauss & Corbin, 1997). The first round of analysis was done separately for every user group (*i.e.,* survivors, service providers, and

faith leaders), then cross-coded to identify the common themes across all three groups. The concepts of transformative and restorative justice were raised explicitly by two participants as alternative models to the current flaws in the criminal justice system, which led to considering alternative justice models in the second round of analysis done in 2022. I formed the survivor-centered transformative justice conditions and the different scales of interventions applicable to those conditions deductively from the literature and inductively from the data. IRB approval was obtained prior to conducting the study. Though I do not claim to generalize the findings to all Muslim women, there are transferable aspects in their legal and cultural details to at-risk, immigrant, and minority populations in the US.

3.3. Phase 3: Exploring Survivor-Centered Transformative Justice Processes: Survivor Advocacy, Community Accountability, and Community Transformation

In this phase, I sought to explore how a survivor-centered transformative approach takes place in practice and how technology can play a role in facilitating those processes. I chose to follow a design as a mode of social inquiry approach, "where design becomes a means rather than an end" (Rosner, 2015), meaning to use design as an instrument to examine social phenomena rather than as a way to solve a problem (DiSalvo, 2016; Rosner, 2015). Using design as a mode of inquiry is to understand how design shapes social and political experiences, why and in what way circumstances could be changed, and produce desired conditions, relations, or values. I see this approach as appropriate given that transformative justice and DV have yet to be explored from a

sociotechnical standpoint. A summary of the methods used in this phase is illustrated in Figure 1: Phase 3 Methods Summary

My goals for this final phase were two-fold: 1) to understand SCTJ practices and processes within the DV context, specifically around survivor support and community accountability and transformation within the American Muslim community. And 2) translate advocacy and accountability processes to an online setting in a manner that considers the impacts of trauma. The knowledge I hoped to gain included current and envisioned SCTJ community accountability and survivor support processes for Muslim survivors, how to minimize and deal with trauma triggers when interacting with survivors/abusers as a researcher, what techniques have been tried and found effective (both in-person and online), what is complicated or concerning within those processes, especially when moved to an online platform, and lastly, how to mitigate those risks and concerns. I aimed to meet survivors where they are, trust their judgment, and support their decision-making process while providing tools to nurture their capacity to make informed decisions (Abuse, Health, & Services, 2014; Goodmark, 2004; NCDVTMH, 2011) and evaluate how Muslim survivors, subject experts (*i.e.,* TJ experts and Muslim service providers), and other key stakeholders (*i.e.,* abusers, imams, mainstream service provides) resonate with a trauma-informed transformative justice approach to designing CSCW systems. Currently, there is a lack of structured collaboration among stakeholders within the DV ecosystem, leading to disengagement where each party works separately on different aspects of the problem. For example, well-equipped imams are providing spiritual guidance and counseling around DV; cultural-based service providers are advocating for survivors in courtrooms and other mainstream service sectors, faith

communities, and community members; DV advocates are decentralizing DV knowledge and services by distributing local DV resources and acting as temporary shelters; while mainstream service providers are providing shelter, financial, and legal services. Such scattered efforts lack a comprehensive strategy at best and, at worse, may cause more harm (*e.g.,* when imams lack appropriate training, and service providers are oblivious to survivors' needs). At its core, survivor-centered transformative justice aims to make all needed pieces work together to transform communities and systems to serve DV survivors adequately.

In this concept validation phase, I focused on the following key attributes of survivor-centered transformative justice:

- Survivors' advocacy: where survivors are centered by prioritizing their needs and choices, which is mostly lacking in legal interventions and community interventions. To support survivors, I aim to meet the survivors where they are through designing for the values of patience, resiliency, and trauma healing. Customized interventions based on survivors' autonomy can minimize unintended legal harm (*e.g.,* deportation) and help survivors regain control (Center, 2015; Coker, 2002; Goodmark, 2004; Mingus, 2019a; Sapkota, Baird, Saito, & Anderson, 2019).
- Community accountability: where communities are accountable for disregarding, downplaying, or even endorsing violence. It is crucial for communities to acknowledge, put an end to, and assume accountability for violence by enhancing their knowledge, skills, and readiness to intervene and

promote social norms and conditions that deter violence from occurring initially (Interventions, 2012).

- Community Transformation: this refers to the process of going beyond individual accountability and focuses on addressing the underlying root causes and structures that perpetuate harm and injustice by creating sustainable changes within a community to address systemic inequalities, violence, and harm.

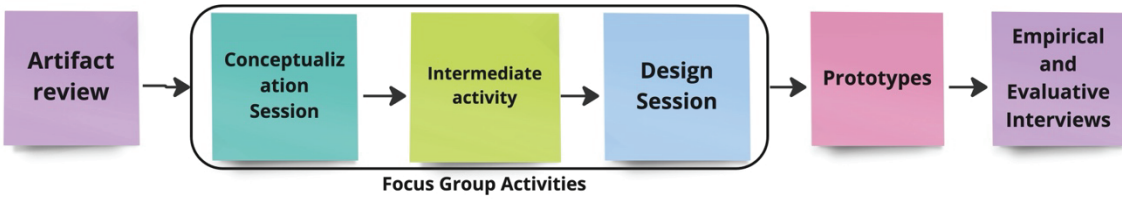


Figure 1: Phase 3 Methods Summary.

3.3.1. Artifacts Review (Phase 3)

To understand how transformative justice is applied, sensitize myself towards trauma-informed care and DV within Muslim communities, and assess productive avenues where TJ can lend itself in sociotechnical interventions, I started by conducting a preliminary artifacts evaluation where I extensively reviewed preexisting resources. I analyzed artifacts in the form of toolkits, handbooks, and strategy guides distributed by advocates, activists, and organizations that have been actively dealing with DV, TJ, and Trauma-Informed Care (TIC) within a culturally-based context for years. Seminal artifacts found include "Innovative Strategies to Address DV in Asian and Pacific Islander Communities" (M. Kim, 2010), the "Creative Interventions Toolkit" (Interventions, 2012), and a collection of restorative justice guides (Drost et al., 2015; Gavrielides, 2015; McCold, Llewellyn, & Van Ness, 2007), trauma-informed care

screening and assessment tools and design principles (Abuse et al., 2014; Chen et al., 2022; Naidoo, 2021; NCDVTMH, 2011), and websites on TJ approaches and resources to further support integrating TJ into design (Durazo, 2011; Mimi E. Kim, 2011; Tarusarira, 2019). Such artifacts afforded contextually relevant definitional work and practices, including expanding intervention to include community members who are most affected (Interventions, 2012), and best practices around trauma-informed healing, how to include allies, facilitators, and resources, support survivors-victims, and promote accountability in research and design.

3.3.2. Focus Groups (Phase 3)

I followed up by leading focus-group workshops divided into two sessions: a conceptualization session and a design ideation session. The purpose of the focus groups was to solidify survivor advocacy, community accountability, and transformation practices within the Muslim community and produce designs that reflect those practices.

Focus Groups Recruitment and Participants

To recruit participants, I contacted DV organizations, Muslim-focused health networks, mosques from across the US, social media figures and groups, referrals, and previous participants. The criteria for focus group participants were to have experience working within domestic violence advocacy and services, worked with Muslim survivors as a service provider or an imam or mosque liaison, or identified as a Muslim survivor who is not in immediate danger. In recruitment emails and ads, I used a participation form via Google Forms to reach out to interested participants. The form collected emails, first or preferred nicknames, experience, preferred times, how they heard about the study, and whether they preferred to be in groups of people they knew or not. Initially, I planned

for at least four focus groups, each consisting of three to five participants. However, after conducting the first two sessions, I found that smaller groups of two achieved a more balanced interaction, smoother conversation flow, and reduced participant fatigue from lengthy Zoom calls. A total of 23 participants participated; 22 were divided among ten focus groups. Most sessions included two participants, except for two sessions with three (FG02, FG10), and one participant (P08), who identified as a survivor, opted for a one-on-one interview rather than a group session. Participants were offered $50 gift cards upon completing both sessions.

Table 3: Phase 3 Focus Group Participants' Demographics.

Participant ID	Focus Group ID	Sex	Experience
P01	FG01	F	Advocate | Service Provider | Survivor
P02	FG01	F	Advocate | Survivor |
P03	FG02	M	Clinical social worker | Worked with imams and Muslim community
P04	FG02	F	Advocate | Diplomat | Survivor
P05	FG02	F	Service Provider | Survivor
P06	FG04	F	Advocate
P07	FG04	M	Community Member
P08	Interview	F	Survivor
P09	FG03	F	Advocate | Service Provider | Survivor
P10	FG03	F	Advocate | Service Provider | Survivor
P11	FG05	F	Advocate | Mosque Affiliate | Survivor
P12	FG05	F	TJ Advocate | Survivor
P13	FG06	F	Survivor
P14	FG06	F	Service Provider
P15	FG07	F	Service Provider | Survivor
P16	FG07	F	Service Provider | Survivor
P17	FG08	F	Service Provider
P18	FG08	F	Survivor
P19	FG10	F	Service Provider
P20	FG09	F	Service Provider
P21	FG09	F	Service Provider
P22	FG10	F	Service Provider
P23	FG10	F	Survivor

Recruitment was challenging. After reaching out to 85+ contacts, I only received 28 responses, five of whom did not follow up. The low turnout could be attributed to the increased workload social workers and organizations faced, particularly during the COVID-19 pandemic, or the potential mistrust organizations may have in sharing sensitive information with national secular institutions. An alternative recruitment option was to use a third-party recruiting service (*e.g.,* userinterviews.com). In this context, I felt uneasy about utilizing such a service because I was concerned about the potential of coming across as offensive or unsympathetic to users by publicly promoting a call for participation. To overcome such hurdles in future research, I suggest building collaborations between research institutions and designated organizations that have rapport and trust built into the community and are willing to connect interested clients and connections with researchers. In return, researchers can offer monetary or service compensations, agreed upon based on the researcher or institution's capacity and the organization's needs. For example, offering a technical or design service, social media set-up, etc.

Focus Group Activities

The focus group protocol consisted of three main sections: two workshops and an interim activity. In the first workshop (*i.e.,* the conceptualization session), participants went through a light icebreaker to ease introductions and were provided the working definitions we relied on in this research to build a collective understanding. The first half included questions about defining SCTJ processes based on participants' practical experience. Questions included how participants define justice for survivors, recalling how justice for survivors and accountability for abusers looked like in their contexts,

what is effective, and how such processes can be improved. To encourage interactivity and allow participants the option to participate by writing, not only speaking, I created and shared Google slides that showed prompts and dedicated visual spaces for participants to fill at their convenience (*e.g.,* what comes to mind when you think of Justice for DV survivors?). I chose Google Slides rather than other dedicated participatory platforms (*e.g.,* Miro) to reduce any learning curve required on the participants' ends. The second half of the conceptualization session was scenario-based, where I showcased two hypothetical scenarios grounded in literature and real stories collected from my previous dissertation research. The first scenario focused on a convert victim-survivor who goes through emotional and economic abuse and is further alienated by the community leader due to the abuser's affluence within the mosque community. The second scenario highlighted an immigrant's experience, in-law mistreatment, physical abuse, and implicit racism by law enforcement. Each scenario was followed up by questions soliciting types of harm, survivor needs, accountability measures, and identifying and addressing root causes of the harms encountered. Lastly, sessions ended with reflections on ways to concretize SCTJ processes in participants' own practice and their perceived ideal advocacy and accountability processes (the complete guide is found in Appendix A).

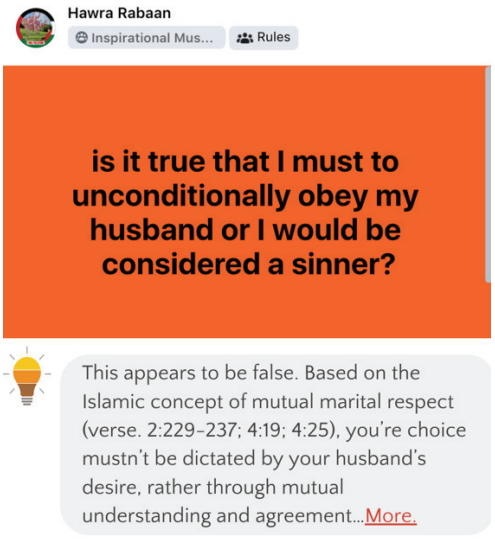
After the conceptualization session, we considered ways to seed the design conversation prior to the co-creation design session. I prepared an intermediate activity, which was a one-on-one interview within a week or two from the design session. During the interim activity, participants share or envision (via sketching or thinking aloud) ways to include community accountability and survivor advocacy measures in a virtual

environment and the concerns and risks they might have, specifically when moving to an online setting. However, after conducting two individual activities, it was apparent that it demanded much time on both the participant's and research team's end and may discourage further participation due to the lengthy time commitment. Thus, I modified the activity to be design prompts via email customized per participant based on concepts and conflicts highlighted from the conceptualization session.

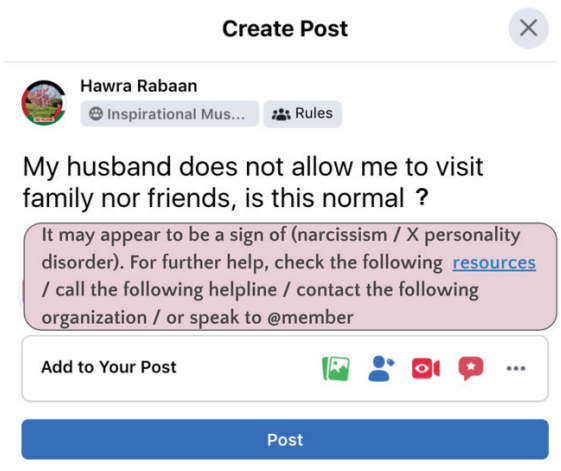
The last part of the focus group activities was a co-creation session. The goals of this activity, which were also shared with each group, are the following: 1) Envision ways to design for community accountability and transformation, and trauma-informed survivor advocacy. 2) Identify risks and challenges in addressing DV virtually from an SCTJ perspective. And 3) identify ways to mitigate risks of DV advocacy online. I used a generative approach in the design sessions to give users greater ownership over the design process. The overarching activities included brainstorming technological ideas around survivor advocacy and community accountability, contextualizing the brainstormed ideas into specific scenarios, and lastly, having a group discussion around the ideas shared. The session started by sharing participants' thoughts from the intermediate activity to create a shared sense of what the group proposed. To guide the session, I showed a list of rules adapted from the IDEO's rules of brainstorming (IDEO, n.d.), followed by ten minutes for open-ended brainstorming around advocacy and accountability. Along with the brainstorming prompt, I showed examples of my ideas to ease participants into using basic sketches and critically thinking about existing tools (Pictures 1, 2, 3). Participants were encouraged to share their sketches or write their ideas on the shared Google slides.

What you know & who you know
My husband shoved me very hard against the wall & called me bad names
What do you want to do?
Know if this behavior is permitted in Islam?
Find support in your community?

Picture 1: Sketch Prototype Example Shared with Participants


Hawra Rabaan
Inspirational Mus...
Rules
is it true that I must to unconditionally obey my husband or I would be considered a sinner?
This appears to be false. Based on the Islamic concept of mutual marital respect (verse. 2:229-237; 4:19; 4:25), you're choice mustn't be dictated by your husband's desire, rather through mutual understanding and agreement...More.

Picture 2: Prototype Example Shared with Participants


Create Post
Hawra Rabaan
Inspirational Mus...
Rules
My husband does not allow me to visit family nor friends, is this normal ?
It may appear to be a sign of (narcissism / X personality disorder). For further help, check the following resources / call the following helpline / contact the following organization / or speak to @member
Add to Your Post
Post

Picture 3: Prototype Example Shared with Participants

Sessions details: The focus group sessions occurred between October 29, 2021 - February 22, 2022. The first session (*i.e.,* the conceptualization session), focused on defining and identifying SCTJ processes, was initially estimated to take between 45-90 minutes, then modified to be between 1:30-3:00 hours to match the flow of the first few conducted sessions. Duration ranged between 53 minutes to three hours. The brainstorming co-design session was estimated to be between 40-60 minutes and ranged between 36 minutes to 1:30 hours.

3.3.3. Design Concepts (Phase 3)

After concluding all ten focus groups, one interview, and several intermediate design activities, I conceptually translated the attributes suggested by participants into a storyboard, an interactive low-fidelity mobile application prototype, and one med-fidelity desktop prototype. To condense the multitude of ideas into three design concepts, I completed two rounds of analysis. The first round refined survivor advocacy and community accountability processes and categorized design themes. However, the immensity of possible ideations required a narrower analysis. Thus, I completed another

round of analysis focused on the underlying values of advocacy, accountability, and transformation processes. The top values for survivor advocacy included: empowerment, safety, dignity, informed decision-making, and social and political participation. Values for abuser accountability were about trust building, self-accountability, and support. Lastly, the values of community transformation were growth, interconnection, and solidarity. As a result, I produced three broad design concepts which aligned with the majority of the aforementioned values, as follows:

- ❑ The first design is a desktop webpage (demonstrated in Appendix B) intended as a landing page for Muslim victim-survivors who are trying to identify an abusive situation, understand what DV entails from a legal and spiritual perspective, and seek assistance around resources available (support groups, imams, lawyers, therapists, etc.) The design encompasses multiple survivor-advocacy values:
    - Designing for a **trauma-informed interaction** (Chen et al., 2022), support, and a dignified connection where survivors' feelings are acknowledged, validated, and respected: we used soft colors, friendly language, and assistance is enacted through a motherly or older woman wise figure (suggested by at least two participants).
    - For **informed decision-making** and meeting victims-survivors where they are (*e.g.,* not push them to leave if they are not ready to), the system responds based on the user's input by presenting them with relevant knowledge *(i.e.,* socially, legally, spiritually), the options available to deal with the abuse (*e.g.,* legal action), and their possible outcomes textually and visually.

- To account for **safety**, an exit button is added, and the first question the user is asked is whether they feel safe, shortcut buttons and multiple input methods are provided for an instant interaction (*e.g.,* text input for victims who are in the presence of kids or the abuser, and voice for immediacy).

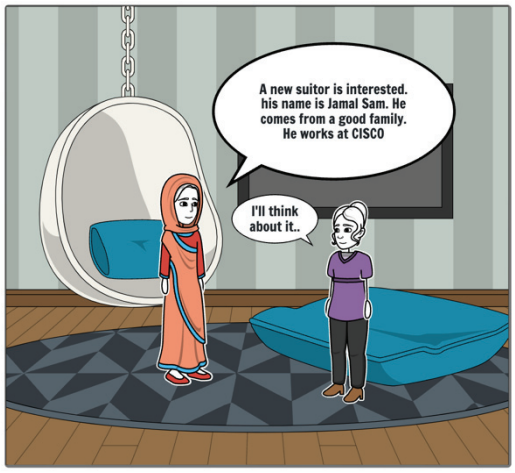
❑ The second prototype demonstrated a mobile tool (found in Appendix B), where victim-survivors can document incidents of abuse by writing it, or by recording an audio or video. The full or parts of the story can then be shared with familiar advocates, counselors, or Imams of the user's choice, or through a list of locally vetted resources. The app is also designed for advocates or community leaders to keep track of cases and connect with locally available resources as needed. The values this tool adheres to are:

- **Care continuity**: where users tell their story once and have a seamless interaction with one point of contact rather than being redirected to different professionals and retelling their situation repeatedly, which can cause revictimization and retraumatization.
- **Safety:** the resources recommended (*e.g.,* imams, therapists) are vetted by survivor allies (*i.e.,* advocates, service providers, and survivors themselves).
- **Abuser accountability**: where advocates and allies can use the story to support their intervention and prove abuse in legal and social settings.
- **Empowerment:** where survivors can find support, knowledge, guidance, support, and allies.

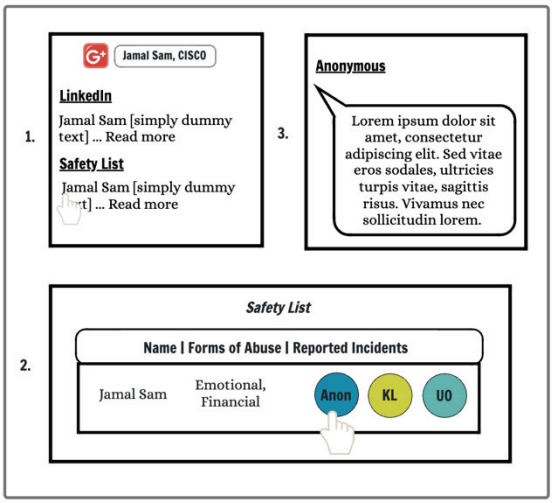
❑ The last design was a storyboard of a use-case scenario for a public database of perpetrators and their offenses reported collectively anonymously or by their chosen initials (see Appendix B). The values this tool manifests include:

- **Accountability**, through reporting abusive behavior and using it as a whisper network for future potential partners. It is common for converts or people from outside the community to be in the shadows of community members' history. Gatekeeping is common with the underlying patriarchal beliefs that hindering a man's potential to marry and publicly acknowledging the harm he's done is more harmful than informing a potential spouse.
- **Empowerment** and help in making an **informed decision** prior to potential marriage.

(1)



(2)



(3)

Pictures (1-3): Storyboard Design Concept

Through the above design concepts, I strove to understand where to situate technology to minimize the burden on survivors and support the supporters (*i.e.,* service providers and community members) without producing further harm through design. Next, I demonstrate how I went about my quest to gain that knowledge.

3.3.4. Expert Interviews (Phase 3)

I consider an expert to be an individual who has actively engaged with survivors for an extended time, whether as a social worker, community leader, academic scholar, or who has experienced DV first-hand and is now healing and helping others in their healing journey. This last mode of data collection was to evaluate the feasibility, strengths, and weaknesses of integrating SCTJ into design. The goal was to use design to elicit and understand the social phenomenon of domestic violence and survivor-centered transformative justice within sociotechnical interventions. To recruit experts, I contacted 17 potential participants, seven of which responded and completed the interview (expert participants information is listed in Table 4: Phase 3 Expert Participants Information.). I

conducted semi-structured empirical and evaluative interviews. I walked them through each prototype and encouraged participants to share their reflections aloud about what and in which contexts are practical, possible challenges and risks that may arise, and how they may improve its features. In addition to empirical questions about their SCTJ-related practices. Lastly, I asked questions to uncover ways to practically implement possible features (*e.g.,* how to build male-allyships within systems). The complete interview guide is in Appendix C.

Table 4: Phase 3 Expert Participants Information.

Participant ID	Experience
EP01	Advocate | Helpline Expert | Survivor
EP02	Academic Scholar, studied DV in the Muslim community for over a decade
EP03	40 years Social Worker | Author | President and Co-founder of Muslim Social Services
EP04	Faith Leader
EP05	Faith leader, Shelter Co-founder
EP06	Social Media Public Figure | Survivor
EP07	Housing and Procurement Manager, TJ DV organization

3.3.5. Data Analysis (Phase 3)

This study consisted of several levels of analysis: 1) Memoing: a lighter analysis process started prior to each session, where I would take notes on what I expected to find in the session, then during and after the session (Given, 2008). I summarized new findings, SCTJ practices, interesting interactions, discomfort, conflict, interactivity level, etc., and compared them with pre-session notes. 2) Two rounds of thematic analysis (Caplan & Purser, 2019) for the co-design sessions, aiming to generate prototypes for expert evaluations. Lastly, 3) a deeper ongoing inductive and deductive analysis of all

sessions, including expert evaluations. Data analysis took place intermittently between March 2022 and May 2023. I used two qualitative analysis tools to aid the analysis process: *Dedoose* and *Dovetail*[10], mainly for visual clarity, to organize and categorize themes and subthemes and swift through the data with ease.

To summarize the approach followed in phase 3 of this dissertation: I performed conceptualization sessions, individual intermediate design activities, design brainstorming sessions, design aggregations and ideations, underlying values analysis, designing three concepts that encompass the key values echoed by the participants, and lastly, concept evaluations with experts. Though extensive, I find the methods followed to match the magnitude of the issue studied and yielded deep insights into the nuances of domestic violence in a minority population, the layers of entangled social, cultural, political, and structural conditions, and extensive undertakings in tackling DV.

Ethical Considerations

Throughout all three phases, participants were provided with the interview protocol and study information sheet before interviews and group sessions to explain the purpose and details of the sessions, set expectations, and account for any triggering content. Protocols included positionality statements highlighting my professional background and intent of this study and engagement guidelines that encouraged respect and empathy, established sessions as safe spaces, and stressed participation is voluntary. Verbally, before starting the interview, and in written form in the study information sheet, participants were allowed to fully withdraw or skip questions at any time if they did not feel comfortable and ensured the confidentiality of their information.

[10] https://dovetail.com/

During phases two and three, participants were prompted on their help-seeking and recovery details and challenges rather than the details of the abuse. In the event that participants persisted in sharing abusive details, the interviewer listened attentively and offered genuine empathizing words. To the best of my knowledge, none of the participants were in active danger. Upon the request or interest of participants, I shared relevant resources (*e.g.,* local or national cultural DV organizations) verbally with participants when prompted during the interviews and later compiled and delivered a document with toolkits for imams created by DV organizations and DV-related resources and mobile applications to imam participants who showed interest in acquiring such knowledge and as a gratitude gesture for their participation.

To handle the difficulty of the topic, I established some personal care practices such as limiting interviews within a time frame and decompressing by taking nature walks after sessions. Audio recordings were collected based on the participants' permission. Lastly, only the participants' preferred first names were shared to ensure confidentiality during interviews. Data were anonymized in storage and write-ups and saved securely on the university servers, where only I and vetted research assistances had access to the audio files and transcriptions. The interviews' audio files were deleted upon transcription.

Limitations

A limitation could be that I did not speak to mainstream service providers (*e.g.,* shelter staff, police members) to understand their points of view, nor to abusers to grasp the injustices they face in the system and society.

Chapter Four: Saudi Women's Sociotechnical Agency Practices in Addressing Domestic Abuse

In this section, I discuss how participants described their abuse and how power relates to the abuse, and the agency practices undertaken by participants to recognize, manage, and mitigate abuse. I illustrate how participants used technology to expand their agency and aid in their resistance.

4.1. Domestic Abuse Experiences

When I asked how the participants defined domestic abuse in Saudi Arabia, they primarily referred to physical and psychological abuse in its emotional and verbal forms. At least two participants suggested physical violence is only considered abuse if the act leaves a physical mark, such as a bruise. A few participants mentioned belittling, extreme ordering, controlling, and negligence from a partner or parent as types of abuse. While the participants condemned oppositional acts (*e.g.,* economic-social abuse, control) and framed them in our conversations as abusive behavior, most participants did not name such practices as domestic violence. Such changeable definitions and disregarding acts as abusive could be the result of normalization, where societal rules shaped the belief that certain abusive activities are typical or highly anticipated as part of Saudi women's day-to-day life (Foucault 1975, 1976, Mahmood 2006). Alternatively, using the terms violence or abuse could be viewed as disrespectful towards parents when describing opposition towards a daughter's choices, violating Islamic and cultural values of honoring one's parents and respecting elders (Abokhodair, Hodges, & Vieweg, 2017; Al-Dawood et al., 2017). How the participants defined abuse was contingent upon their background, experiences, and social conditioning.

I identified three primary forms of domestic abuse as described by participants: economic-social (Alhabdan, 2015), psychological, and physical abuse. Shapes of economic-social abuse ranged from enforcing financial and social stipulations, prioritizing funding a son's education over a daughter's, to depriving women of allowance, education, marriage, divorce, health coverage, or employment. Several participants described how their or guardians they knew restricted women from obtaining economic stability through pursuing an education or obtaining employment. For example, one participant described how her husband would not allow her to accept any job offers, using excuses such as *"the salary is low"* or *"the manager is male, and I don't want you to work with a man"* (P6). In other cases, six of our participants shared experiences where women they knew were allowed to work but required to relinquish part or all of their earnings to their husbands or fathers. For instance, P5's close friend was allowed to work as a nurse, but her husband would take her earnings and *"only give her 300 SAR (less than $100 USD)"* (P5). Alternatively, stipulations were placed on women if they were to work, for example, maintaining all household duties, following a specific dress-code, and not speaking to men in the workplace. As one participant shared about her sister:

> "…he'd try to leave his work earlier than his working hours so he [could] go home and tell her that she's falling short and didn't cook him lunch" (P9).

To ensure that the women abided by their demands, husbands often threaten them with divorce or polygamy. Using economic-social abuse, guardians effectively limited women's opportunities for independence, resulting in their continued dependence on economic, social, and logistical support, making it difficult for women to break away from the cycle of abuse (Westlund, 1999). As for psychological abuse, participants reported belittling and suspicion, coercive and controlling behavior, manipulation,

extreme monitoring, negligence, and ostracism. In these cases, the abuser would use sustained, repetitive, and expressive behavior to impair women's mental and emotional life (USDoJ, 2020). For instance, one participant shared how her ex-husband would drag her into

> "Fights, anxiety, endless arguments, pressure, financial arguments in regards to raising the kids, questioning [her] motherhood abilities to raise kids, questioning [her] behaviors, relationships, activities of daily living" (P17).

In extreme cases, women might be ostracized from their families for failing to abide by their family's will. For instance, P9 shared her family disowning her cousin after marrying a man from a different religious sect. Their justification was based on their feelings of shame in the community*: "They didn't want her because she made them lose face and brought them shame"* (P9). Such extreme measures can be linked to the weight and importance of social acceptance and the concept of saving face (Sehlikoglu, 2018). The act of disownment concretizes the traditional social role imposed on women as protectors of the family's honor and name in the community (Al Fassi, 2019; Dodd, 1973; Hilal, 1971). In this case, marrying outside of the family's religious sect (or other social boundaries such as tribe, wealth, and nationality) is considered dishonorable.

Finally, while instances of physical abuse were only personally reported by two participants, nearly all participants shared stories about others they knew who lived in physically abusive relationships. Participants reported being burned, slapped, and strangled by their abusers. For P16, what made her seek a divorce is *"that he raised his hand, he took me to the desert, strangled me until I lost consciousness!" (P16).* Her ex-husband threatened her with a knife and took their 12-day old daughter away.

None of the participants recounted stories of sexual abuse. Undisclosing sexual details could be attributed to the topic's sensitivity—where discussing intimate topics is considered taboo. Given that marital rape is unrecognized by law (Institute, n.d.), another possibility is that sexual abuse may not be viewed as abuse but as a sexual duty and marital responsibility. In the region, a wife's denial of her husband's sexual desires is often viewed as a sin (Muda et al., 2017). Participant Nine, however, recounted a story of reproductive coercion where her maternal aunt was coerced by her husband into bearing additional children, despite already having six children and the deleterious impact it would have on her health. While P9's aunt initially refused due to degenerative disc disease, she eventually gave in when her husband threatened to marry another woman. According to conservative religious doctrine, if a husband desires more children, he is allowed to remarry for that purpose (Rohman, 2013).

The findings from this phase suggest that laws, religious understandings, values, and cultural norms, privilege male guardians and amplify abuse in Saudi Arabia, based on the adapted definition of power as a socialized and embodied phenomenon of relational imbalance. Within Saudi culture, respect for elders and maintaining the familial fabric, honor, and family reputation are highly regarded. As I illustrated above, such norms can often create an opportunity for domestic abuse. Domestic violence is unacceptable for some Saudi women, and they have developed different coping and resistive strategies to deal with, mitigate, or end such abusive conditions. In the next section, I describe how participants exhibit agency and resist domestic abuse and how technology impacts such agency practices.

4.2. Agency within Domestic Violence in an Islamic feminist context

In this empirical section, I identify three key practices, based on non-Western Islamic feminist views of agency, focused on how women deal with domestic violence. For each practice, I highlight how interwoven cultural, religious, and political contexts impact Saudi women's ability to recognize and deal with domestic abuse. I attend to technology's role in enabling or hindering women's agency. These practices include: 1) recognizing abuse, where women identify abusive practices and situations, 2) managing abuse, where women find ways to cope with ongoing or anticipated abuse within their constraints, and 3) seeking non-abusive futures, where women decide how to mitigate the abuse or leave their abuser.

4.2.1. Recognizing Abuse

In this section, I explain how the women in this study identified their situations and other's practices as abusive. Identifying abuse can be a challenging, long-term, and indirect process. Women unlearn behaviors, deal with entrenched social norms, and overcome the fear of losing their social standing and support. Certain social practices reinforce norms around women's status in society and the family, creating hurdles in identifying abuse. Key barriers to recognizing abuse include normalizing violence, guarding family honor, weaponizing religion, social policing against women, and the fear of harming their current and future wellbeing. Barriers influence the cognitive and emotional dissonance between women's lived reality and their beliefs, values, and exposure to alternative possibilities free of abuse. Women deal with barriers and learn to identify abuse through two inter-related processes: 1) individual reflection, when one individually contemplates their abuse, and 2) social reflection, when they involve support

from others while working to understand their abuse (Patton, 2003). These processes helped women identify and understand certain practices as abusive, rather than an unquestionable social hierarchy, as I discuss next.

The first challenge to identification deals with pervasive social norms that taught women to be acceptive of practices they now categorize as abusive (Foucault 1976, Mahmood 2006). Participants struggled to break from the values they learned growing up. For example, P9 referenced the uneven breakdown of domestic responsibility in her household. Participant Nine takes care of the house chores, extensively attending to her husband's domestic needs while he passively exists, as she tries to live up to the expectation of an 'ideal' wife. She described a dissonance between her gender-equality beliefs and her actions as a wife, where she continually attempted to break with internalizations of patriarchal norms. Conventional gender roles and responsibilities may be viewed as unjust when they burden women with unbalanced social duties and rules than their male counterparts. Participant Nine narrated observations about her family's gender dynamics, finding them to align with the broader society, where women's duties are emphasized and rights are hardly stated, while men often have decreased domestic responsibilities and more economic opportunity and expectations (Al Fassi, 2019). Women are first to be negatively judged for neglecting their assigned duties, as opposed to men, where *"the man is a man, he never falls short"* (P9), indicating men are treated more gracefully by the broader community. Several participants repeated similar sentiments about society imposing unfavorable gender ideals, fortified through parenting, school texts, religious discourse, and the media (see also (OxGAPS, 2018; Tønnessen, 2016; Wadud, 2013)). Creating social norms and expectations that reinforce gendered

disparities or rules that harm women (Tønnessen, 2016). Abuse across generations often normalizes abuse (Foucault 1976, Mahmood 2006), by taxing women's ability to recognize different possible realities, gain support, or break abusive cycles. P9 explains:

> "If I grew up with the idea that a man can hit me, and it's fine because he's a man and I'm a girl and I should not say anything because if I speak up it is Aib[11] and would scandal the family. I won't do it!" (P9)

In Saudi culture, women often disproportionately carry a higher burden of "protecting" family honor than men. Family honor is protected by conforming to social morality rules (Al Fassi, 2019; Alsheikh et al., 2011). Once family honor is "damaged by an individual, it affects the entire family" (Abokhodair et al., 2017). Indeed, an honorable title given to a woman is being a "daughter of men," when women adhere to socially ideal morals, guarding and protecting the reputation (honor) of her home, husband, family, and tribe. Related is the challenge of fearing social, economic, and bodily harm to women's current and future wellbeing caused by social stigma. The family is a cherished social unit in the Saudi community. Attempting to detach from your family is legally and socially challenging (OxGAPS, 2018; Worden, 2017). As women try to break from a marriage or family, they often face systematic repercussions (e.g., only the husband can issue legal documents for their children), and societal backlash, questioning their womanhood, morality, and piety. For example, P17's father refused to permit her sister divorce from a physically abusive husband. P17 explained that:

> "The stigma is more, the social burden from society is more, the societal words are more [important] than the real emotional harm. People are really, really attached to the habits, tradition, and culture more than wellbeing. . .more than considering long term consequences" (P17).

[11] In Arabic, translates to "shame" or "disgrace". (https://www.almaany.com/en/dict/ar-en/aib/, 2020).

The weight of social stigma manifested in women bearing abuse to avoid the divorcée label because *"if you're a divorcée there must be something wrong or that you're not a good girl [have a bad reputation]."* (P9), or *"what will people say? . . . and now I'm older, who will come take me [marry me]?"* (P5). Regardless of why a couple divorced, women are often blamed, which "squanders" their reputation. As a result, divorcées may be deemed illegible for future marriages or left vulnerable to systematic and social inequalities (*e.g.,* losing financial support after prolonged dependency, restraining regulations around female homeownership and rent, exhaustive bureaucracies of the legal system particularly for women (Tønnessen, 2016; Worden, 2017). Beyond issues of gender discrimination and generational abuse normalization, other social upbringing challenges include weaponizing religion against women (*e.g.,* a man might use religious doctrine to threaten to remarry if a woman refuses to have more children) and social censorship and intervention (*e.g.,* a controlling mother-in-law (Mernissi, 1987), neighbors pressuring women to cover-up (Al Fassi, 2016)).

To overcome these barriers, women individually and socially reflect on their realities. Individual reflection is when a woman starts to think differently about her current situation, finding her experiences to mismatch her beliefs, expectations, and possibilities. Participants described their individual reflections as distinct moments and lengthy, ongoing processes to reevaluate priorities, adjust opinions, and consider alternative options. Participant Six explained a revelatory reflective moment as she approached her 30s, where she decided to discard her ideal marriage goals that burdened her with unbalanced compromises:

> "I was reflecting, I had my three kids already, I was looking back, I couldn't find an achievement of something I wanted. . . I found that I was deprived of continuing my education, deprived of working in a field I want even though I would've reached a good position...this was my transforming and starting point for me. . . I got a wake-up call!" (P6)

Such individual reflection enables women to be active agents in deciding when and how to resist socially encouraged and enforced familial norms. Changes in attitudes and perceptions, such as viewing abuse as abnormal and unacceptable, are critical in potentially leaving an abusive situation (Patton, 2003). In several cases, women's religious views helped ease their mental struggle and allowed them to view their reality as opposing to what they believed was God's intention for women, driving them to overcome unfair social norms and stigma. In the analysis, I view acts grounded in religious beliefs as expressions of religious agency; where actions are taken to adhere to a transcendental power (*i.e.,* their God) rather than to the abusive figure or patriarchal norms (Bilge, 2010; Lindtner, Bardzell, & Bardzell, 2018b; Rutar, 2017). Expressions mentioned by participants revealing religious agency included:

> "I have rights, my God created me with rights, this is my principle." (P1), "I'm fully faithful that God is fair, that he doesn't put you in a situation unless he gives you an exit, but sometimes you just don't see it." (P15) and the Quranic verse 'God does not change the condition of a people until they change what is in themselves.'[12] (P6)

Participants sought validation through religious texts and concepts, developing intrinsic motivation to maintain their sense of self, and ultimately, improve their relational and living conditions. Participants also re-learned and inspected cultural norms attributed to religion, coming to their own conclusions on what was factual. Participant Nine's reflection process started with developing a critical stance from observing surrounding

[12] (Qur'an 13:11)

gender dynamics, which she then investigated and compared with her religious understanding:

> "When I got married, I started reading a little about religion, it turned out it's not my religious duty as a wife [to cook, wash, clean, etc.]! These are habits we got accustomed to, and not my duties at all! I think it's due to unawareness and something we inherit as generations that you please the man, lets all learn this, end of story!" (P9)

Examining social norms and questing for religious text supporting gender-equity mirrors the Islamic feminist discourse. Women are challenging religious authority and policies individually and in social movements, by unlearning societal teachings while preserving their spiritual grounding (Al Fassi, 2019; Tønnessen, 2014; Wadud, 1999)

The second key process in recognizing abuse is social reflection, where women seek social support (Patton, 2003) for counsel and learn from others' perspectives and experiences in ways that shape abuse definitions. As participants contemplated their situations, their close friends or trusted confidantes (*e.g.,* therapists) helped them reflect upon, identify, and validate actions as abusive, and provided guidance. For instance, one participant shared how she first reached out to her friends for support and then to a psychiatrist for help in dealing with her abusive fiancé. The psychiatrist helped her to *"redirect the way I think. The little confidence I was left with, she built it back again"* (P13). Participants used a variety of media and platforms to understand and enrich their own perspectives, including engaging with social media content and other women to produce social reflections about abuse. Others delivered public content on abuse and offered customized advice to followers. Participant 15 used Snapchat, an ephemeral social media platform for sharing images and videos, to contribute her knowledge of domestic abuse, self-improvement, and personal advice to her followers. In the process,

she came across many stories of abused women who were trying to understand their situation and sought advice on how to deal with an abusive family member or husband. For P15, Snapchat afforded her and her followers privacy and enabled direct messaging, including voice messaging.

In the west, many scholars often undervalue reflection as a key part of agency, and view leaving the abusive situation to be the ideal outcome (Abu-Lughod, 1990; Bilge, 2010; Lindtner et al., 2018a; Mernissi, 1987; UNWomen, 2012). In the data, I rarely found leaving to be the primary intention. Instead, their immediate plan was to find a solution to remain in the marriage or family household. Identifying abuse is a key turning point in attempting to mitigate abuse or minimize its ramifications. By reaching out to friends and councilors, these women worked to process and recognize that acts of their partners or family members constituted abuse, allowing them to proceed and make plans for how to deal with the abusive situation. In their reflection practices, women use information and communication technologies to aid in their individual reflection and seek help from others (*e.g.,* online content such as eBooks and social media). Communication was mainly preferred via private media, such as phone calls, email, social media, and text and instant messaging to contact formal and informal supports (Patton, 2003). Next, I explain the practice of how participants decided to manage the abuse.

4.2.2. Managing Abuse

In managing abuse, I focus on the critical practices that seek to moderate the adverse impacts of ongoing or anticipated abuse within the relationship. For the interviewees, managing abuse required significant effort, and their strategies were impacted by available structural support (*e.g.,* policies, laws, and societal beliefs) (Patton,

2003), personal beliefs and values, life stage (e.g., a women's decision may change after her children grow older), and socioeconomic background. Abuse management strategies were not only about the women's preferences or goals, but inclusive of acceptable actions within their families, communities, and societies (Sultana et al., 2018). I highlight two key interconnected processes of managing abuse: 1) working within constraints, where a woman explores her options within the pervading social, legal, and religious regulations, and 2) developing resiliency, where women focus on building mental, physical, and financial capacities to minimize the abuse's impact.

Some Western feminism has been critiqued as undervaluing the impact of structural constraints on marginalized women (Bilge, 2010; Crenshaw, 1991; Rankin & Thomas, 2019; Salem, 2013, 2014; Sultana et al., 2018); hence, it may often diminish the strategies these women use to survive (Mahmood 2006, Salem 2013). While resisting or moderating abuse may not seem like people asserting their will; however, from an Islamic feminist standpoint, ideology, language, and discourse influence agency, or a person's ability to conceive, contemplate, and take action. Therefore I ought to focus beyond just rational, willful action (Bilge, 2010). In the following, I showcase how the women work within constraints and develop resiliency to manage their abuse actively, and the role technology plays in shaping these strategies.

4.2.2.1. Working within Constraints

Working within constraints is the practice of finding feasible paths within their social, cultural, economic, and political conditions that work towards diminishing adverse impacts of ongoing or anticipated abuse. Participants expressed their agency by finding gaps in their social circumstances. Frequently reevaluating their decisions while

remaining within an abusive situation until safer opportunities presented themselves. Women worked the system by covertly challenging their abusers' demands or finding acceptable ways to pursue their goals. Participant 16 shared how her female cousins only verbally agreed to their brothers' terms not to interact with male co-workers as a precondition to pursuing careers in a mixed-gender workspace, yet acted according to their own judgment around their colleagues. Participants reported knowing women who would search for flexible employers not requiring guardian consent. While jobs with flexible policies provided an opportunity for income and skill development, they allowed for wage exploitation and risking exposure to their families[13]. Women leveraged their personal and professional social networks to apply for jobs and hold interviews from their homes to circumvent mobility issues. Beyond the data, trends have risen within the country of women seeking marriage mainly to travel or study abroad (Anon 2014), due to social and legal preconditions requiring the presence of a male guardian companion (Worden, 2017). Otherwise, a guardian must legally waive his responsibility towards his guardianee.

Women used compromise as a strategy to nudge or undo enforced constraints while maintaining the relationship. For example, when P6's husband continually rejected her plea to accept job offers, she asked*, "fine, what's the profession that you're ok with? He said: look for a job at your kids' school",* which led her deciding to work under her husband's stipulations despite having no desire to be a teacher. She agreed because she wanted "to leave home and see the world and feel like I achieved something." (P6).

[13] Scenarios where women can seek flexible jobs occur in family homes where the head of the household (i.e., usually the father) is not heavily present (*e.g.,* has more than one wife and house), yet is adamant about enforcing familial protocols.

Women taking seemingly very restricted decisions was important for a sense of autonomy. When her husband compelled P12's relative to either give up the job she enjoyed, otherwise relinquishing her salary to retain the title "head of the household," and after fruitlessly attempting to deter the husband, she preferred earning a sense of accomplishment through continuing to work over controlling her income:

> "...her husband came and demanded that her salary gets deposited in his account. *"I'm the man of the house, and your salary has to help me with the household expenses", "I get your salary, and I give you your allowance"* ...she wanted this job, this career life, and this sense, even if the income wasn't hers, the sense of accomplishment" (P12)

While such conditions can still be viewed as economically abusive (Alhabdan, 2015), as they deny women the right to economic mobility and independence, such responses enable women to influence their lives. Compromise does not take place quickly, requiring time and strenuous efforts, and may lead to jeopardizing basic needs. Participant Six spent six years in the process of opportunity-seeking and a tug of war with her husband when he finally reconsidered his position, allowing her to work. Such exploitation by men and costly compromise by women are socially validated at times to maintain the traditional Saudi societal image of gender roles in the family. Men are the breadwinners, thus are the primary decision-makers of the household. Women are the gatekeepers, protecting and maintaining the private sphere of the home and family (Wadud, 2013). P6's persistence to work within her constraints shows in the following:

> "[my husband] used to refuse anything. . . even workshops, [he'd say] "no!", why? "it won't work, who's going to take you and bring you back?, I don't have money, etc." he'd shut every door. For the art workshop, I saved up for it, and I told him, he said no...he started interrogating, and I said it's only five days from 5-9pm...I'll have lunch ready!...if you'll be late, I'll leave it heated on the stove" (P6)

The prior demonstrates an example of working within the system to undo social norms, where agency resides in reiterating norms to destabilize them (Mahmood 2006, pp. 46-47). Despite P6 being accustomed to her husband's disapproval of expanding her activities beyond the home, she maintained the norm of asking permission and complying with his rules. However, expanding her financial capacity while simultaneously addressing his concerns, lead to circumventing the stipulations and excuses imposed. Compromise often resulted in a higher loss for the woman; a unique example was P15's gainful settlement. Her father offered an equivalent salary to the job she landed and gave up under his request, until she found a more decent opportunity, in his opinion.

When failing to reach an acceptable compromise, women resorted to patience in hopes of circumstantial change. Changes include their abuser's death or transferring to a more sympathetic guardian through marriage or law. Our 17th participant's older sister only divorced her physically abusive husband after her father died, because the father, troubled by societal shame, refused to grant his permission. Another circumstantial change is the abuser shifting his perspective to accommodate for her aspirations. Moreover, Muslim Saudi women may endure abusive relationships either based on values (*e.g.,* out of respect towards their parents, preserve the family's reputation), or religious grounding, where women tolerate in hopes for the current and afterlife's virtues of patience. Our participants' reasons for working within their constraints included the mental and emotional difficulty they would bear had they decided to go against their families, the scarcity of structural support, and lack of familial or social support outside their current situation.

4.2.2.2. Developing Resiliency

Resiliency refers to how women developed capacities to cope with their abuse (Kendra & Wachtendorf, 2003), including building professional readiness and skill acquisition, self-esteem, physical strength, and financial capital. At times, women used financial and socially deterring strategies to stop a controlling figure. Developing resiliency through building professional readiness within an abusive relationship manifested through self-learning, workshops and courses, and monitoring the job market to stay updated with skills needed. For example, P6 worked on improving her skills despite abiding by her husband's orders to withhold pursuing a career to bear, and almost solely, raise their children. She learned a new language and kept up with her field of study and its job market to help her find opportunities when the kids grew older. Participant 11 spoke of two women she intimately knew, her grandmother and uncle's wife, who insisted on studying with their children and grandchildren after being deprived of formal education in their childhoods:

> "At the time [my grandmother] got married, girls didn't finish school; not even elementary school...when she got married she didn't know how to read! But she continued going back to school and then having a child, taking a break and then going back! She'd open the Quran and say "I'll read and you correct me". I swear it would take an hour to read one page, but she still does it!" (P11)

P11 mentioned *that "In my family in general, girls are really encouraged to pursue their degrees, specifically by my grandmother"*. Within the Saudi and Islamic culture, older women are strongly respected by both genders, and their words are well regarded. Though not always leading to financial independence, women's determination influenced their own and others' resiliency; through setting an example and using their position to push the status quo of other women.

Participants developed resiliency by maintaining and building their self-esteem. Women sought refuge in therapy, self-development books, and expressions of religious agency in handling the abuse. Others used goal-setting and picked up hobbies as a way to redirect their focus and boost their self-confidence. For example, P6 developed her resilience by finding a recurring time window for self-care:

> "By 9 pm [the kids] are asleep, I have an hour or two for myself, [my husband] used to go out every day. I began to draw, get in online workshops like self-improvement, I learned Italian during that time" (P6)

Through keeping a routine and intentionally allocating time for her needs, this participant came to understand herself better. She *"started working on myself and focus on me! What I want, what I want to do, what I want to achieve!",* and as a result, found ways to circumvent the limitations set by her husband: *"if [the husband] is closing the doors in my face, it doesn't matter, I can do things from home"* (P6). Participant Six elaborated on how she felt God with her throughout the process, demonstrating her religious agency:

> *"*After two months I got the job! it's as if God is saying, 'work on yourself!' *'God does not change the condition of a people unless they change themselves'*[14]! When I changed from the inside, my life changed!. . . Subhan Allah (glory to God)[15]! When I changed my perspective and came to settle down from the inside, when I didn't strive for appreciation from the outside, I didn't wait for my husband to say or do, I started separating emotionally. I settled psychologically. Then things started to come my way on their own" (P6).

Her beliefs established her confidence in overcoming restraints, which reflected on her attitude towards her husband's actions and her life, allowing for further growth. In building resiliency through self-esteem, participants learned to reframe their thoughts, find motivation, and seek reassurance for their actions. Participants also expressed the need to be physically prepared to face and manage abuse:

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[14] (Qur'an 13:11).
[15] Rehman, Muhammad. "Meaning of Subhan Allah." Medium, Medium, 19 Nov. 2019, medium.com/@rehmaan1011/meaningof-subhan-allah-712c3bfa016f.

> "I was beaten. Now I really want to strengthen myself through karate or self-defense, because you can be put in this situation again" (P16).

Encountering physical violence had P16 thinking of self-defense to build her confidence and protect herself. Participant 16 indicated the persistent risk of future violence and elaborated that Saudi women must develop their ability to defend themselves physically, financially, and mentally because of the lack of systematic support.

Lastly, women strove to build their financial capital for education, travel expenses, and to help rent a space away from their abuser. Participant Four mentioned a woman worked on saving money in high school to deter a physically abusive father and protect herself and her mother. While another participant saved for a drawing class, she was keen to explore, regardless of her husband's constant rejections and excuses for her prior requests. A scholarship grantee deterred controlling behavior through financial hardship, by holding back the allocated stipend for her chaperon brother during their time abroad*: "back in those days, the stipend for the guardian would be deposited to my account, so that was my fight back, financial oppression"* (P15). Though financial independence did not typically allow for bypassing policy and social control, participants did use their income for professional development, flight booking, and moving abroad to avoid relying on their provider and alleviate his power.

In managing abuse, technology helped build their skills and hobbies through e-learning and educational content and enabled moral support through social networks and instant communication platforms. Personal and professional social networks and job boards were a gateway to finding job opportunities and providing flexible, professional assistance. As with P17's relative who *"had job interviews and would try to access organizations and apply to job applications through LinkedIn, because she can't go out*

and about. She has a master's degree. . . he refused to take her to many interviews, three of them in six months, and she couldn't call a driver and she couldn't drive." (P17). Professional social network platforms allowed women to overcome mobility constraints. However, the hurdle of a guardian's formal or informal consent remains to impede women's progress. Such technological practices contributed to women mitigating adverse consequences of abuse by working within their constraints and sustaining their resilience to tolerate unfavorable outcomes. Next, I present our third and last key practice, seeking non-abusive futures.

4.2.3. Seeking Non-Abusive Futures

This last section focuses on how women in this study attempt to break from their abuse. I describe two key strategies used by participants to actively engage with the abuser to cease or leave the abusive situation: 1) mediation, where women leverage their connections to intervene, and 2) leaving, where women leave the abuser temporarily or permanently. In this study, women considered leaving to be the last resort, if at all, for several reasons: divorce or fleeing a family home in Saudi's family-oriented culture is socially criticized. Leaving can be at the expense of familial moral and having shelter and financial support, and socially stigmatizing, harming the woman's and family's reputation. Resources such as DV-related organizations and shelters are scarce and laws protecting survivors of violence are unenforced. Such factors contributed to women rarely considering leaving as their first choice. Instead, their primary intention was to find ways to resolve their situation and remain in the marriage or family household, and only considered leaving when met with strong familial support or dire abusive circumstances.

4.2.3.1. Mediation

Mediation is the process of women leveraging their connections to intervene with the abuser. Connections included immediate support such as family and close community members, and broader support such as influential leaders and professional services (Patton, 2003). When seeking non-abusive futures, mediation often aids women to broaden their autonomy within their relationships, and frequently leads to a temporary or permanent departure from their abuser. Most commonly, participants sought mediation through family members and had intermediaries redress the situation to protect them from abuse. For instance, P5 shared how her brothers-in-law removed their sister from the abusive husband, where he reacted by:

> "He'd come after her to their family home and yell and curse, all the neighbors would know, to the extent where fighting would occur with her brothers." (P5)

Despite the woman's distress and brothers attempting to intervene, the husband later succeeded in taking her back. Participant Five mentioning the neighbors indicated the seriousness of the situation; however, they did not intervene nor report to the police. The neighbors' inaction demonstrates one of several possibilities: upholding the belief that DV is a private family matter, their hesitance to involve officials, or their unfamiliarity with laws and resources for women's protection. Familial support keenly enables women to leave their abuser. Support refers to several vital ways family sided with women, including providing shelter, financial and moral support, and shielding against societal shaming. For example, P12's relative separated from her husband, who attempted to prevent her from pursuing a career in another city. Backed by her family's

support, P12's relative separated from her husband, gained custody of their daughter, and continued with her career.

For our participants, the most influential member in mediation was a male ally, who oftentimes was a supportive *mahram* (*i.e.,* unmarriageable male kin) present in the woman's life (*e.g.,* father, brother, uncle) or became her legal guardian (*e.g.,* husband). This need for male allies reflects Saudi society's patriarchal nature. The abuser is likely to value advice from another man he knows and respects, rather than from a woman.

> "When it gets serious, a man is for a man. I believe that when a man discusses an issue with a woman, it's not like when he talks to a man, a woman is weak no matter what, if my father scolds me I might go to my room cry for two days. I wouldn't talk with rationality as much as with emotions, so what do I do? let a man talk to men." (P1)

Male allies play a pivotal role as they use their position and power to support and advocate for women in their lives. The ally's role was well acknowledged in the interviews as the phrase and sentiment "men are for men" was echoed by multiple participants, depicted as men understanding each other better and further respecting men's opinions. Participants mentioned the significance of their ally's age and place in the social hierarchy. An ally of the same age or older than the abuser or a paternalistic relative will have more influence than a younger or unrelated ally. Participants signified the ally's reputation (*i.e.,* morally approved by the community, educated, wise) and social influence (*e.g.,* highly ranked professionally, has prominent social connections). Nevertheless, the risk of backlash is likely. One woman explained the reaction she got from her husband when she involved her brother during their separation, who told her to *"thank your God I took you back!",* and ignored her clauses to mend their relationship. Losing a supportive ally often had detrimental effects on a woman's future. Participant

Seven switched from an ally to an abuser through the guardianship system after her father's passing. As dictated by Saudi law, an unmarried woman's guardianship transfers to her paternal lineage (Alharbi, 2015). Participant Seven's older half-brother, her newly assigned *wali* or custodian, physically abused her until she relinquished her inheritance. Participant Seven lived abroad at the time of her father's passing, and was lured by her half-brother to go back:

> "There was conflict...they said, "we don't want anything, just come home, let us see you," and I went. He burnt my hair, and cut it off" (P7)

The immense power passed over through the guardianship law facilitated guardians' exploitation of their dependents. In P7's case, the guardianship transfer resulted in undoing the father's will of financial independence for his daughter. In rare cases, participants reported having a female ally who influenced their guardian. For instance, P9 shared her maternal aunt successfully convinced her father to allow P9 to study abroad. Participant Eight reported an aunt swaying her father's opinion to wed her sister to a non-Saudi man. A factor contributing to effective mediation is it being non-confrontational, which may be undervalued in mainstream feminism (Bilge, 2010; Mahmood, 2006; Sehlikoglu, 2018). However, using an Islamic feminist lens, I recognize mediation as an agency expression within social norms. It holds family members credible and accountable to defend and work towards justice for women.

Beyond family-based support, the second type of mediation women sought was through community leaders and professional services to help them stipulate what conditions would allow them to return home safely. For example, P4 shared a story of her friend who relied on the status and influence of a chieftain (*i.e.,* a leader of Bedouin

tribes elected by tribal elders[16]) to deter the actions of her physically abusive father. The chieftain's intervention resulted in her father temporarily stopping the abuse. While an imperfect solution, P4 and her mother had experienced the longest time without being abused by the father. Men, like clerics, who are well-respected in society and by the abuser, can deter abuse and handle marital problems. While there are other options for diminishing abuse in the US and in Europe (*e.g.,* police or family centers), these outlets tend to be less prominent or effective in KSA. Shelters were almost unheard of by participants, and public services (*e.g.,* police centers, courts) were seen as unpredictable. Participants commented on the Saudi judicial system's subjectivity, where cultural norms of victim-blaming, sexism, and subjective religious beliefs often influence rulings against women asking for divorce (Alhabdan, 2015). Police commonly dismiss abuse cases as a private family matter (Alhabdan, 2015), all leading to women's reluctance to report or file charges against their abusers (UN, n.d.). Women also worried going public would jeopardize the family's reputation (Norah Abokhodair, 2016). Participants discussed the possibility of abusers turning against them by using *wasta*—which "loosely translates into nepotism, 'clout' or 'who you know'" (Barnett, Yandle, & Naufal, 2013), where the abuser may leverage his connections to nullify the case and may punish the woman for reporting the abuse.

Involving mediators is often an effective strategy for women to achieve their goals (*i.e.,* end or minimize the abuse) while working within familial and societal structures. In mediation seeking, communication technologies were participants' assets. They relied on private instant text messaging services and phone calls to reach family

[16] Bedouin. Retrieved from https://www.newworldencyclopedia.org/entry/Bedouin

members, keep their allies updated, and ask for advice and relief at times of despair. For example, P1 made clear that *"when my dad would get upset, the first thing I'd do is get my phone and contact my brother via WhatsApp, right away, [telling him] this and this happened"* (P1). Some participants preferred instant messaging over meeting in-person to avoid invading people's privacy. Participants reported instant messaging applications, and features such as WhatsApp groups, are heavily used by different age groups and both genders in the region, and information rapidly spreading through such platforms. Indeed, in Saudi, professional services increasingly rely on instant messaging and social media in their outreach and communication.

4.2.3.2. Leaving

Women develop non-abusive futures when they decide to separate from an abusive situation temporarily or permanently. Women leave abusive environments to gain a reprieve or work on resolving the situation. A common practice for Saudi women is to stay with family when faced with severe marital issues. For example, P6 stayed at her family home when she was on the verge of divorce. She developed terms to present to her husband through a mediator, her brother, before agreeing to return to her husband's house. Similarly, P4 reported her friend staying with relatives on multiple occasions and later renting an apartment for her and her mother until her abusive father showed an earnest intention to stop the abuse. In other cases, women may leave an abusive situation permanently. On rare occasions, in the data, women eloped, sought asylum, or unlawfully left the country, which often resulted in harsh consequences such as disownment, forced separation from their family members, or losing their government funded study abroad scholarship.

Leaving an abusive relationship or environment was not a common occurrence for our participants. Apart from the aforementioned structural obstacles, some cultural norms that privilege group harmony over women's individual wellness frequently deter women from leaving an abusive situation. Leaving is viewed as a threat to the family and the community's social fabric. Instead, women mainly rely on their family's moral, financial, and logistical support in departing from the abuse. To permanently leave abusive situations legally, women often collected evidence for court cases and learned about how court systems worked. To hold the husband accountable in court, women would collect evidence, including official reports, visual proof, and witness testimonies. For example, P16 went to a hospital after surviving a violent attack from her husband and used the hospital report to support her case against him:

> "[after the attack] I surrendered and told him I'll stay with him, the next day I went to the hospital to get a report and immediately went to the police and sued him, it got up to the court of justice" (P16)

Participant 16 fleeing was facilitated through faking compliance during the abuse, being informed on where to go and how to report, and having her mother's house available as shelter. Participant 16 showed dismay and disappointment in the judicial process and how her case was handled. The bureaucracy, inconsistency of the judges' verdicts, and the time and effort required made it a draining process she did not find worth pursuing. Rather, P16 preferred redirecting her focus to her career and raising her daughter.

Evidence is critical for legal purposes, P12 explains the process of reporting abuse to family affairs centers:

> "It's better to have evidence, pictures, videos that prove the abuse that happened make her case stronger and the chances of them acting on it

> would be higher. . . if it's been proven that he did indeed abuse his wife, they'd contact the police to get the husband and she can perform Khul'[17], or they would force him to divorce and leave her alone. However, if it wasn't proven then he can go to the police while his wife is at the center and raise a complaint against his wife...if she doesn't have evidence on her abuse, the police can take her back to her husband's place" (P12)

Learning how to prove the abuse is another burden the victim must endure to seek justice. Women remain vulnerable to whether courts accept their evidence, facing the risk of being returned to the abuser for disobedience (HRW, 2013). Saudi women also sought to gain legal knowledge and advice on how to navigate the legal system. Participant 16 spoke of the importance of learning how to engage with a judge to help facilitate the process of leaving her abuser. Whereas P17 relied on her therapist's expertise for insider information on how to work the legal system and gain resources to assist her in obtaining a divorce, stating: *"she had resources, she directed me to lawyers, she showed me how to navigate the system, how to do a procuration, how to ask for child support"* (P17). Participants relied on keeping track of officials' social media accounts, such as the Ministry of Justice's Twitter account for the latest policy updates, and referred to using a mobile application dedicated for women's legal information and concerns[18].

Similarly, participants talked about how they established social resources to assist in their escape plan. Participant 17 used her brother's connection to an airport employee to ensure she arrived at the terminal gate without her husband's interference

[17] Recalled in Section (2.2.1).

[18] The mobile application "Know your rights" is created by a Saudi lawyer to help women be aware of their legal rights around common issues (*e.g.,* divorce, alimony, and custody), local lawyers, general advice, among other resources [19]. It is free of charge, and provides short, animated videos and simple written steps to sue, and answers over 150 frequently asked questions.

(*i.e.,* terminating her travel permit without her knowledge). Navigating the social and legal system requires knowledge, networks, and resources, demonstrating the importance of addressing agency practices within such structural barriers.

Various technologies were used in fleeing an abusive situation. For example, P16, a new mother at the time, described escaping while her abusive husband was asleep:

> "I had fled because he raised his hand...I sneaked out, put on my shoes and abaya [formal dress], took the house key I'd hid, ordered Kareem [ride-sharing app], and took my phone. I left my stuff there, took my purse and the necessities and left." (P16).

To aid in her escape, P16 relied on a mobile ride-sharing application to transport to her mother's house. Access to the ride-sharing application was crucial to her escape, especially that she lacked male-allies; her father was deceased and only had her sister and mother as her nuclear family when it was still illegal for women to drive. Other participants mentioned private messaging platforms and mobile applications assisted in leaving their abusers. Participants consumed information and communication technologies (ICTs) to build, transfer, and gain tacit knowledge. Participant 17 learned about Saudi women's legal rights, and P7 received contact information for free consultation services via WhatsApp. Participant 15 was helping transfer her expertise through Snapchat.

In this chapter, I presented participants' reported experiences and the three key practices adapted to recognize, manage, and depart from domestic abuse.

4.3. Conclusion

This study investigated Saudi women's understanding of and experience with domestic abuse, their agency practices in mitigating the abuse, and the role of technology in those practices. For Saudi women, leaving an abusive situation was not common. Rather, they build their resilience and find ways to work within their constraints. Saudi women also used mediation of family members, community leaders, and professional services to reconcile with the abuser or to remove them from the situation. Participants used ICTs including social media to stay updated with laws and regulations through official accounts and mobile applications to stay informed about legal rights and referred to educational content to strengthen their resilience. Through this work, I join prior calls for empowerment from within communities' existing sociocultural fabric, by focusing on designing for their values, which I elaborate on in the discussion chapter (Chapter Seven).

Chapter Five: Survivor-Centered Transformative Justice: An Approach to Designing Alongside Domestic Violence Stakeholders in US Muslim Communities

In this section, I first answer the question "Why Should Designers Use Survivor-Centered Transformative Justice?" from the data and supported by literature. I demonstrate how combining SCTJ and design allows researchers to account for the inequalities endured by victim-survivors and community members, address underlying causes of difficult social issues by working alongside disadvantaged groups and within complex and complicit systems, and understand how community members define and prefer to work towards justice. Though I illustrate SCTJ within the US Muslim context, I intend to provide a transferable framing for other contexts where designers wish to understand the scale and scope of long-standing social problems, work within existing structures while building new infrastructures, and finally, center harmed individuals by respecting their choices.

In the second part of this section, I answer the question "How to Use Survivor-Centered Transformative Justice in Design," based on insights from the participatory interviews to highlight possible intervention areas for reducing harm, repairing harm, and promoting healing within different scales of relationships for the DV survivors. I organized the suggested solutions based on their scale into micro, mezzo, and macro levels of interventions. Micro-level interventions involve providing individual support to survivors. Mezzo-level interventions focus on smaller groups or organizations such as mosques, anti-DV organizations, mainstream services, or support groups. Macro-level interventions impact a larger portion of society through public policy, legislation, institutions, and research. By addressing these three levels of intervention, I uphold the

values of the SCTJ approach, which aims to change the root causes of abuse, hold community members accountable, and advocate for victim-survivors.

5.1. Why Should Designers Use Survivor-Centered Transformative Justice?

☐ ***To Understand Social Inequality and Complexities:***

Transformative justice was initially created by and for communities experiencing systemic oppression, where a group of people is intentionally disadvantaged based on their identities, such as class, race, gender, or religious beliefs (Mingus, 2019a). In the case of Muslim Americans, they are a minority population who have been historically surveilled by the state (Afnan et al., 2022; Said, 2010), targeted by law enforcement (Said, 2010), and face religious, immigration status, and gendered discrimination (Hammer, 2019 Ch.2, p38- 39)(Oyewuwo-Gassikia, 2016), resulting in collective trauma (Ali, 2017) and a fraught relationship with state resources and services (Afrouz et al., 2020; Oyewuwo-Gassikia, 2016). Muslims may hesitate to interact with the criminal justice system tied to DV services due to the complicated relationship between law enforcement and Muslims in the US (Aaronson, 2021; Said, 2010). This relationship is complicated for several key reasons, including incidents of questionable charges, deportations, and detentions (Hurley, 2021; Shiekh, 2011), community infiltration and surveillance (Afnan et al., 2022; Said, 2010), and inadequate handling of hate crimes (Glickhouse, 2017). Also, law enforcement's sometimes lax outreach efforts often exacerbate mistrust among local Muslim communities.

The widespread discrimination in governmental entities against Muslims (i.e., Islamophobia) (ACLU, 2017; Freeland, 2001; Institute., 2019) and, in return, their lack

of trust in the system was echoed by our advocates, survivors, and imams alike. Islamophobia is described as fear, prejudice, or intolerance towards Islam or Muslims, "characterised by suspicion, deep-rooted prejudice, ignorance, and, in some cases, physical and verbal harassment" (C. Allen, 2020). Specifically related to Muslim women, participants highlighted the issue of gendered Islamophobia (*i.e.,* prejudice towards Muslim women). Participants reported such prejudice during interactions with school counselors, shelters, and public services. Viewing Muslim victim-survivors as less worthy of care impedes survivors from service seeking and burdens them to tolerate the abuse.

Another identity-based vulnerability for immigrant Muslim women is their immigration status, which abusive partners often use to control their partners (*e.g.,* using deportation threats) (Kasturirangan, Krishnan, & Riger, 2004; Rana & Marin, 2012). Further, immigrants and refugees are commonly exposed to trauma caused by involuntary relocation, preimmigration circumstances, and the migration process (e.g., living in grim refugee camps) (Lee & Hadeed, 2009; Rees & Pease, 2007). In the case of victim-survivors, trauma resulting from the abuse is compounded by earlier trauma (*e.g.,* forced migration) (Rees & Pease, 2007).

Complex inequality requires multidimensional interventions, which survivor-centered transformative justice approaches offer by addressing the root systems of structural inequality facing not only the survivor but community members (including the abuser), in addition to the injustices and trauma survivors undergo (Asad, 2019; Coker, 2002; Mingus, 2019a). In the Chapter Seven, I explicitly discuss how an SCTJ approach toward systemic change may benefit designers.

- ***To Design Within Existing Structures:***

Alternative justice theorists and advocates have contrasting views on whether systems (*e.g.,* law enforcement, legal systems) should be invoked to address injustice or avoided to dodge systemic harm (Coker, 2002; Stubbs, 2002). Not only do TJ and RJ differ in their relationship with the CJS (as explained in Section 2.2.4), but within the TJ movement, advocates have called for abolishing existing systems and building new ones as opposed to reform, while others view the current time as an opportunity to accomplish change within existing systems (Mimi E Kim, 2021). Within the context of DV, SCTJ expands and prioritizes the victim-survivor choices, including involving the State (Mimi E Kim, 2021; Stubbs, 2002), because harm and abuse persist when DV is considered a private matter to be addressed within the family rather than a social issue that requires public and systemic intervention. Relying on community practices entirely away from criminal justice and public resources can contribute to further harm by allowing community members to enable abuse (Coker, 2002).

In the data, victim-survivors' immediate communities stigmatized and shamed talking about abuse, denied DV's prevalence in the community and actions required on their leaders' and members' behalf and pressured victim-survivors to tolerate the abuse rather than seek professional and legal help. According to advocates, survivors, and imams, two factors make it necessary to involve law enforcement: 1) local communities continue to enable abuse and 2) the shortage of religious institutions' services. A nuanced issue that Muslim victim-survivors commonly face is the discrepancy between religious and civil divorce (M. Alkhateeb, 2012; Macfarlane, 2018). Because religious marriage contracts are not reflected in the civil system, a controlling tactic used by

abusers is to divorce civically and maintain the religious marriage or vice versa. For example, when a woman is divorced legally but not religiously, her marital status upholds socially, depriving her of the opportunity to leave the abuser or find another partner. Whereas if their marriage is religiously bound away from the court system, fundamental rights such as alimony and child support are negotiable or denied as an extension to the abuse (M. Alkhateeb, 2012). By not reflecting divorce in both systems, harm is inflicted where survivors are either kept hostage in their marriage or their legal divorce rights are ignored. Constructing DV as a public issue and crime stresses its seriousness, allows for communities to hold individuals accountable, and attends to the survivor's choice and need for external validation and intervention (Coker, 2002; Islam et al., 2018). In this study, survivors frequently experienced denial and gaslighting, which is when a person is manipulated into not believing their own experience, by their communities when they spoke up against abuse. Often, the abuser's financial and social prominence contributed to revictimizing the victim-survivor within her community and the justice system. For example, two imams stopped supporting P22 when she decided to press legal charges against her abuser; in another case, imams declined to support P06 because of her husband's religious influence within the mosque community. SCTJ acknowledges both the benefits and harms potentially inflicted by the system, however, leaving DV solely for the community to handle can bring more harm than good. I recognize the subtlety in balancing such claims; there were multiple ways where public services fell short of helping our survivors, including when shelters turned down survivors for health and capacity reasons; when pro bono lawyers refused cases lacking evidence of physical abuse (despite the prevalence of psychological, financial, and

emotional abuse tactics that are difficult to document); and when the police discouraged victim-survivors from pressing charges knowing the abuser's financial affluence would deplete the victim's resources in court and cause her more harm. Survivor-Centered Transformative Justice attends to these consequences by focusing on strategies to change community norms and control systemic harm. In the sample, several cultural-based DV organizations contribute to preventative work aimed at changing social norms and systemic practices through community outreach, imams training, legal advocacy, and mainstream service providers coaching. Imams and advocates are taking matters into their own hands by speaking at sermons, community events, and outreach programs. However, the community needs to support interventions and heal from the internalized stigma and denial harming their communities. Survivor-Centered Transformative Justice provides grounds for community transformation, requiring contextualized, collaborative, and consistent long-term efforts on behalf of all stakeholders involved (*i.e.,* community members, abusers, faith institutions, non-profit organizations, mainstream service providers, and law enforcement). Abusers are to be held accountable and community leaders, law enforcement, and service providers must be trained to adequately serve DV victim-survivors according to their specific needs and circumstances. Aiming to achieve both, to design within existing structures while working towards building healthier and sustainable systems is possible. However, I work within to preference the victim-survivor's choice and because current alternatives are less-developed and in exploratory stages (Mimi E Kim, 2021). In the discussion chapter, I reflect on designing for diverse experiences and backgrounds in vulnerable situations with the intention of not reproducing harm. I discuss designing for abuser accountability and behavioral change

and influencing community ideology as ways to transform the conditions enabling gender-based violence.

- ***To Center Survivor's Autonomy:***

Often, in cases of social issues like domestic violence, victim-survivors are decentered, which I define as when a person's choices, preferences, and autonomy are disrespected and ignored. I can see this decentering happening in multiple ways, including in abusive relationships and when seeking services, but can also happen in how designers approach design situations in terms of how to understand a problem or how to address a problem that the victim-survivor is facing. A way to correct this decentering is through "supporting survivors around their healing and/or safety and working with the person who has harmed to take accountability for the harm they have caused" (Mingus, 2019b). In the DV context, survivors are centered by individuals, communities, institutions, or policies when a survivor's autonomy is prioritized (*i.e.,* their choice of when, what, and how services and support are provided), where abusers take responsibility for their actions based on the survivors' needs, whether it's community exclusion, financial responsibility, legal repercussions, or a sentimental apology with a commitment to behavioral change. In comparison to the criminal justice system, where survivors are rarely centered, and restorative justice approaches, where harm is restored by relying largely only on community practices, SCTJ encourages leveraging community, mainstream, and governmental support to sufficiently aid the person being harmed in regaining their lives away from harm.

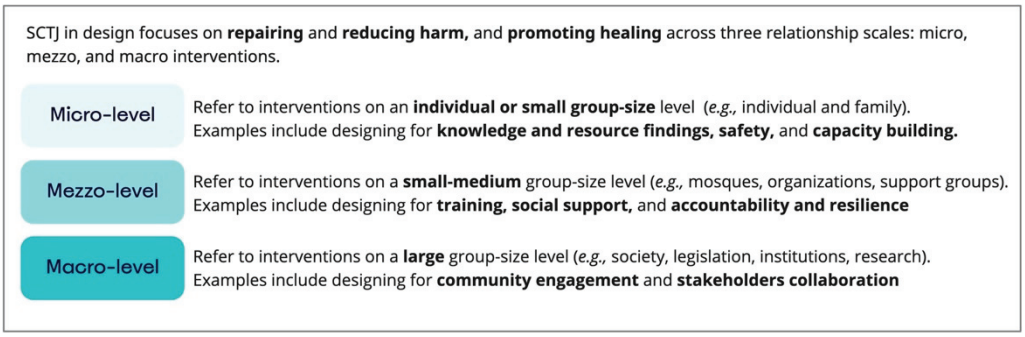
In this study, I found that survivors' needs were frequently deprioritized by the criminal justice system and their local communities. The criminal justice system is tied

to DV, where once abuse is reported by the victim-survivor or through witnesses, it follows a strict line of procedures that do not necessarily align with the survivor's choices or priorities (Cross, 2019). For example, when a victim-survivor seeks shelter services, criminal justice systems are often triggered, which may result in an abuser's deportation or detainment. This, in turn, deprives children of male father figures, leaves the survivor void of financial resources, and opens the survivor up for community shaming. On a logistical level, shelters were viewed negatively by Muslim survivors due to the fixed structures and rules shelters have. Participants expressed victim-survivors' need for flexibility around meals (*e.g.,* having halal meats, eating at sunset when fasting), space for daily prayers, and privacy away from men for women who wear the hijab (Sokoloff & Dupont, 2005). Such needs are all rooted in their religious and cultural values, and accommodating their needs can minimize hesitancy and discomfort toward shelters. Participant 11 stressed centering survivors by allowing them to be heard, understanding their traumas, and trusting in their decision-making. Survivor-Centered Transformative Jusice as an alternative model of justice, provides space for supporting survivors with services based on their own definitions of justice while relying on non-punitive practices. Comparatively, advocating for a harm-reduction approach centers strategies taken by survivors to reduce adverse consequences, regardless of what the community or system might find appropriate (Koyama, 2001).

Finally, centering domestic violence survivors in their help-seeking process can be done by providing female and religious support options within law enforcement and faith institutions. By female support options, I mean the possibility to speak to a female officer, imam, or service provider. Participants expressed anguish when speaking to

male officials and imams about their abusive situation due to privacy concerns and the potential lack of understanding and support. Being sensitive to traumatized individuals' needs is crucial in their recovery process (Protocol, 2014). When gender is part of a traumatic experience, as in DV, victim-survivors can experience intense fear, anger, or discomfort in dealing with the same gender as the abuser (Protocol, 2014). Thus, part of centering victim-survivors is attending to their nuanced preferences during their help-seeking and healing journeys (Chatterjee, 2019; Goodmark, 2004; Oyewuwo-Gassikia, 2016, 2019; Sokoloff & Dupont, 2005).

5.2. How to Use Survivor-Centered Transformative Justice in Design


SCTJ in design focuses on **repairing** and **reducing harm,** and **promoting healing** across three relationship scales: micro, mezzo, and macro interventions.
Micro-level
Refer to interventions on an **individual or small group-size** level (*e.g.,* individual and family).
Examples include designing for **knowledge and resource findings, safety,** and **capacity building.**
Mezzo-level
Refer to interventions on a **small-medium** group-size level (*e.g.,* mosques, organizations, support groups).
Examples include designing for **training, social support,** and **accountability and resilience**
Macro-level
Refer to interventions on a **large** group-size level (*e.g.,* society, legislation, institutions, research).
Examples include designing for **community engagement** and **stakeholders collaboration**
Figure 2: Findings Summary: SCTJ in Design.

In this empirical section, I demonstrate empirical insights from the participatory interviews to highlight possible intervention areas for reducing harm, repairing harm, and promoting healing within different scales of relationships for the DV survivors (a summary of the interventions is in Figure 2). The second half of the interviews consisted of design activities focused on how the participants envisioned social computing technologies addressing specific challenges discussed in the empirical part of the interviews. I paid careful attention to any possible concerns or challenges anticipated from the prospective designs. Most of the technological transformations envisioned by

participants focused on repairing or restructuring relationships. By relationships in this context, I mean the roles and members involved in the victim-survivors' help-seeking and healing processes, which include the members who have done harm (*e.g.,* spouse, in-laws), the person who's been harmed (*i.e.,* victim-survivor), and individuals, institutions, and policies that influence the victim-survivor's experience. Adapting from social work practice, I organized the suggested solutions based on their scale into micro, mezzo, and macro levels of interventions (Bernstein & Gray, 1997). Micro-level interventions include individually dealing with the survivors. A mezzo-level includes interventions at the scale of smaller groups or organizations. In the US-based Muslim context, mezzo-level groups could be mosques, anti-DV organizations, mainstream services, or support groups. In comparison, macro-level interventions influence a larger portion of society, public policy, legislation, institutions, and research. By attending to the three levels of intervention, I adhere to the SCTJ values of changing the underlying conditions of abuse, holding community members accountable, and advocating for victim-survivors. Though social work practice has been criticized for normalizing power structures (Herz & Johansson, 2012), at its core, social work values integrity and challenging injustice and is focused on individuals and society's wellbeing as a whole (NASW, 2017). When examining social problems, I find social work practice and values to strongly align with HCI and view both fields as allies; social work in providing well-established practical knowledge to apply to social contexts and theories that can guide design and HCI in supplementing interventions with an in-depth understanding and vision of technology's role and impact on interventions.

5.2.1. Micro-level Interventions

Micro-level interventions focus on the individual who has been harmed. Within this study, most of the proposed designs directly focused on victim-survivors' needs within three overarching categories: knowledge and resource finding, safety, and capacity building. In this section, I focus on how victim-survivors begin the critical work of repairing the relationship they have with themselves and the role that technology could play in repairing previous harm and offering up possibilities for new futures. In what follows, I will define and explore each category.

5.2.1.1. Knowledge and Resource-Finding

The top challenge reported by survivors was the overwhelming process they undergo to find relatable and reliable information and resources online that suit their cultural views around domestic violence. Culturally sensitive content would expand DV's definition to include in-laws and family members (M. Kim, 2010; Yoshihama, 2020), rights and responsibilities from a religious perspective, and spiritual-based resources. Participants reported using search engines to find religious information about their situations, only to find victim-blaming content. Searching for legal guidance presented them with an overwhelming amount of information that was difficult to digest, especially during stressful situations. To meet the victim-survivor where they are by minimizing the flux and irrelevance of information, P20 suggested a gradual influx where the tool is *"geared towards Muslims particularly definition-wise. . . that you're informed with first, and then you have different options: (What do you want to do? Do you want to go to a therapist?). Go from less severe to more severe choices, the hotline first, and then all the way down to (here's your court option)."* To enable informed decision-making, victim-

survivors need specific ways to receive and process information, where relevant information is presented step-by-step, and freedom is afforded to choose what route fits them best.

To address content challenges and concerns, participants envisioned optimized search engines, dedicated websites, and mobile applications that acted as a multi-lingual repository for DV resources. Where tailored information is presented based on one's demographic information (including religion, language, and location) and situational information (*i.e.,* DV case, needs). Information needed included local supporting services and shelters aggregated textually or visually in the user's preferred language and tailored to their specific needs (*e.g.,* spiritual-based counseling, interpretation services).

Resources alone are insufficient for people going through abuse. Here, P07 envisions a socially constructed community for support and resources: *"a community of people who are going through the same thing. . . where they are able to receive different resources, where they are able to meet one another or come together as a group, where they can brainstorm themselves way beyond what is needed or what is to do."* P07, F, Case Manager. Online social support groups are effective in providing emotional and informational support for people with shared experiences (Chung, 2010). However, working in online social collaborative peer spaces presents various legitimate safety and privacy concerns, especially for victim-survivors (*e.g.,* (Blackwell, Dimond, Schoenebeck, & Lampe, 2017; Chen et al., 2022; Schoenebeck et al., 2020; Xiao et al., 2022)). A trauma-informed knowledge-finding process entails validation, where victim-survivors' are listened to and believed; solidarity, where DV is acknowledged as a serious problem; peer support, where they are connected with fellow survivors (Chen et al.,

2022); and the victim-survivor's ability to preserve their autonomy. Here, SCTJ manifests in design by centering the user's autonomy in paving the way for victim-survivors to identify the abuse, make informed decisions, and feel supported throughout the process (Chen et al., 2022).

5.2.1.2. Safety

The second category emphasized by participants was the need to maintain survivors' safety. Safety here warrants being physically and digitally safe (*i.e.,* away from technology-enabled abuse (Freed et al., 2018)) from the abuser and potential enablers of abuse, the ability to securely document, share, and report abuse, and to interact with empathetic and capable law enforcement and service providers. Participants stated the need to alert victim-survivors of their abusers' physical proximity and if there is potential technology abuse and learn how to maintain their safety online, which aligns with prior HCI work (Freed et al., 2019; Freed et al., 2018). An example is raised by P12: *"If there's a way to set up some kind of an alarm to say (it looks like there's an added device on your system, or it looks like somebody is gathering your information). I think that could be really helpful"* P12, F, Program Manager. The need for platforms to notify users about potential risks has been proposed in prior work (Freed et al., 2019); however, the issue of misunderstanding the information flow was found to be common for the average user (Freed et al., 2019). Thus, visualization tools are suggested to help users build better mental models about the flow of information across their devices and accounts (Freed et al., 2019).

To design for safety is to balance visibility on ICT and online platforms and guide users on ways to minimize or remove digital threats. Contrarily, visibility, usability, and

accessibility can become harmful when tools are obtained by the abuser, where they can use the same tools to stalk or further control the victim-survivors (Freed et al., 2019; Freed et al., 2018):

> "I would want to know if the abusive partner is going to be alerted. If I'm [the abuser] trying to have your messages forwarded to me, and I try, but you have this kind of security system in place, am I going to be notified that there's a block? because if I'm notified, then I could question you, or I could harass you about it… and create a more unsafe, unstable environment" P12, F, Program Director.

Abusive behaviors are used by abusers to exert control over partners or family members (S. Alkhateeb, n.d.; PFP, n.d.; Rankine et al., 2017). Thus, there lies a trade-off between publicizing DV-related tools and abusers potentially exploiting them for controlling tactics. HCI scholars suggested degrading usability for adversarial users (*i.e.,* abusers) after detecting unfamiliar abusive behavior or unfamiliar usage patterns of exploited accounts (Freed et al., 2018). To minimize abusers' exploitation of DV-related tools, participants mentioned disguising tools under utility or religious mobile applications to absolve any suspicion on behalf of the abuser. Participant 22 explains:

> "You want the people who need it to find it, but then you need them to be safe! so what happens? when you install it [the app] changes names? . . . can I hide it as a Quran app, and then when you open the screen it shows a surah [Quranic chapter], but if I click on surah three times then it opens the app?" P22, F, Survivor.

To avoid risking exposure, participants suggested designing discrete devices (*e.g.,* a make-up kit) or wearables (*e.g.,* necklace, watch) (similar to (Brown, Ayo, & Grinter, 2014b)). Others wished for a texting feature rather than phone calls when reporting to or alerting authorities, which is currently not available in all states. For such interventions to work, access to reliable technology and knowing how to operate the tools are required, which may not apply to many victim-survivors. Lastly, integrating pre-agreed code words during online interactions as ways to uphold victim-survivors' safety was suggested and

is currently used by service providers to communicate with victims, especially during the times of COVID-19, when the abuser is often within proximity. In the context of DV, maintaining the user's privacy may clash with broader privacy and trust concerns for Muslims. For example, famous religious apps have been reported to sell users' information for state surveillance (Media., 2020). Indeed, imams, service providers, and survivors alike disclosed that fear of reporting abuse is a barrier to victim-survivors' safety within the Muslim community. By taking a survivor-centered transformative justice approach, ensuring privacy for marginalized groups involves considering their systemic concerns and how such concerns may affect their technology use and adaptability.

5.2.1.3. Capacity Building

Lastly, I want to highlight the importance of building victim-survivors' capacity to regain their sense of self. By capacity, I mean educational, vocational, and financial knowledge and skills to sustain themselves away from the abuser. Many victim-survivors may have a reduced sense of their own agency and capacity because of the abusive situations. One way to begin building confidence is to seek counseling. Participants found it vital for counselors to be spiritually aware:

> "I was very adamant about finding a Muslim therapist because I felt like a secular therapist can give me tools and they can give me strategies and they can teach me things of course, but I knew that I would need to mend other things that they may not necessarily relate to, or they don't understand" P19, F, Survivor.

Other participants echoed P19's sentiment, where they found spiritual-based counselors' advice relatable to their experience and belief system and answered questions from a faith and cultural viewpoint, for example*, "to explain to them from an Islamic standpoint, why is this happening? Or where do I go from now? how do I deal with this stigma?*" P19.

Whereas P14, a survivor, had an enriching experience with her Christian spiritual-based therapist and recalls an unanticipated moment of revelation when her therapist mentioned, *"God doesn't give you things more than you can tolerate,"* which P14 immediately connected to a Quranic verse, helping her gain the clarity and strength at that moment to push through. Technology was seen as a tool to connect with others going through similar experiences, mentors, and therapists who are affordable and adequately understand the cultural nuances of certain communities. Social media helped P06 transcend physical limitations to escape and heal from an abusive partner:

> "I think women who are in DV get realization from other sisters, going to the village and building a village, we are going to our elders to pick advice for our personal life, I just made my village broader and bigger, and the way I'm doing that is through networking on Facebook" P06, F, Survivor.

Victim-survivors used social media groups to feel less isolated, build their understanding around their situations, and offer advice and help to other victim-survivors in return.

Building financial literacy and providing language access for victim-survivors through cost-effective technologies was emphasized by social workers. Currently, such technologies are offered by big tech companies, however, they are unaffordable for the people who need them the most:

> "Language access is available in a lot of spaces; it still didn't trickle down to the basic consumer. AT&T has I don't know how many languages, it used to be $4/minute. . . the vulnerable people need it the most, and I think it's an evolution" P04, F, Executive Director.

Lack of access to capacity-building services and tools is a significant barrier to fleeing abuse. I join participants' plea for tech companies to make such services affordable and accessible for socially and financially vulnerable populations. Affording literary and

capacity-building services contributes to a SCTJ approach by enabling behavioral change on behalf of the victim-survivors, where they rely less on the abuser and alleviate harm.

5.2.2. Mezzo-level Interventions

Mezzo-level interventions include intermediate-scale interventions within small groups (*e.g.,* family, community, neighborhood) and by establishing credibility and accountability within organizations through building professional capacity and evaluation. From an HCI and DV perspective, mezzo-level thinking may help designers focus on encouraging social change at the group level. In this section, I present designs for group-level change focused on key stakeholders who likely have larger effects on the group. Mezzo-level interventions are critical to promoting community healing, with the underlying assumption that people who know better can do better (Interventions, 2012). In what follows, I will highlight these stakeholders and the possibilities and challenges of design for training, social support, accountability, and resilience.

All three participant groups (*i.e.,* service providers, survivors, and community leaders) stressed the need for standardized DV training of key community members and leaders at the forefront of responding to DV cases. Within religious institutions, mosque structures commonly have a female liaison (often the imam's wife), who is easily accessible to female attendees, assists with their needs, and acts as an intermediary between community members and the mosque leader or board members. Female liaisons are often present and involved during client sessions with the imam. The liaison's role is significant, though their constant presence with the imam and his female guests is religiously rooted, where being privately alone with a member from the opposite sex is prohibited, participants expressed the need to speak to a woman about marital issues. For

imams and their liaisons to qualify as a central point of contact when encountering DV victim-survivors, training must involve specialized trauma-informed spiritual counseling and knowledge-building around available local and national resources and their different roles (*e.g.,* hotlines, credentialed therapists, shelters).

In our interviews, participants often mentioned a need for anti-bias training for community leaders and members alike as bias poses a significant barrier to adequate service provision. Participant Eight mentioned a common type of harm found through service provision she calls “the auntie syndrome,” where:

> "People having improper training, they’d jump in and tell the person what to do, and that’s just moving the power and control to us [service providers]! We are taking from whoever is doing the harm and making it ours! Assuming that we know what’s best and that this person doesn’t have agency and cannot make decisions for themselves" P08, F, Advocate

While the "auntie syndrome" may come from a place of good intentions, ultimately, it is an unhelpful behavior as it does not center the victim-survivor’s wants and needs nor builds up their capacity to act for themselves. Advocates and service providers oftentimes come from backgrounds of survivorship themselves (Hammer, 2019), are exposed to traumatic cases, and experience high workloads, leading to secondary traumatic stress and burnout, which may compromise their ability to serve clients effectively (Kulkarni, Bell, Hartman, & Herman-Smith, 2013). Working within DV services is strenuous, requiring patience, expertise, and self-reflection. Thus, for a survivor-centered approach, bias and trauma-informed training are essential for service providers to attain their full potential when serving DV victim-survivors.

Training direct and indirect stakeholders matters because it may reduce the risk of re-victimizing survivors by shaming and blaming, and giving insufficient or inappropriate

advice (*e.g.,* to stay and be patient). However, an underlying concern was that service providers might lack empathy, as P07 puts it:

> "But that [education] only does so much, to be honest. You need to make sure those people who are receiving that training actually have the empathy to care about their clients who are depending on them." P07, F, Case Manager.

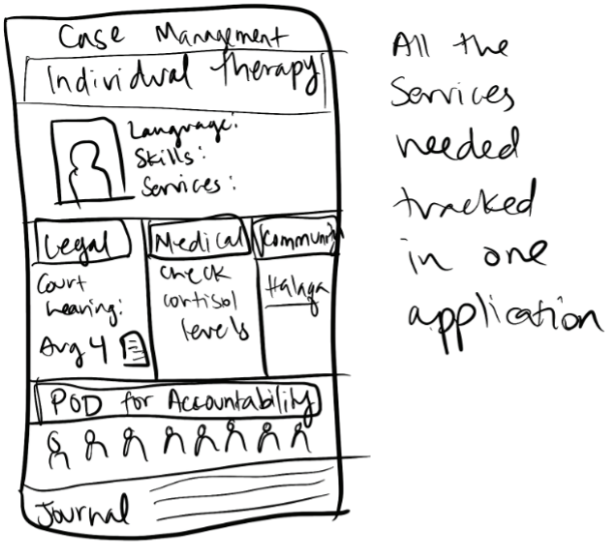
Empathy here means the openness and willingness to develop a shared understanding of their client's experiences and patience for the mistrust that may exist within communities due to historical and institutional factors (Gottlieb, 2021). Further, within organizations, shelters, and government facilities, problems of internalized patriarchy and white supremacy (Mingus, 2019b; Sokoloff & Dupont, 2005), and lack of cultural empathy among mainstream service providers were prevalent. Within the context of DV, cultural empathy refers to how service providers can commit to an ongoing process of self-awareness, view culture as victim-survivors may see it rather than only from their own constructs, and continually consider the social systems that shape the reality for victim-survivors (Gottlieb, 2021).

For technology design to improve training experiences, participants desired to transform virtual platforms to accommodate safety and synergy through design. By encouraging rapport-building and safe sharing around trauma within virtual training and support spaces, technology can emulate in-person interactions. For mainstream service providers, participants suggested providing cultural-related DV content in the form of learning modules using games, scenario-based storytelling, and visual simulations for accounting for the broader DV dynamics where users: *"take an in-depth look at different situations and not just the stereotypical physical violence, but maybe offering simulations, so law enforcement can be trained in different DV situations"* P12, F,

Program Manager. While technology alone will not eradicate internalized biases nor replace needed on-the-ground outreach efforts, technology's role may be to supplement and support efforts where empathy exists, and policies are enforced to encourage anti-bias growth and cultural empathy.

To transform relationships on a mezzo level, participants called for using technology to encourage community accountability and foster interconnection. One way to promote community accountability is by embedding feedback forums for victim-survivors to review and evaluate the services received from organizations and mainstream service providers, providing a way for survivors to voice their concerns and increase the visibility of service quality (L. C. Irani & Silberman, 2013). Sustaining community giving through crowdsourcing is a way to use technology to encourage community commitment to bettering victim-survivors conditions. Participants P02, P03, and P04 proposed using crowdsourcing in sponsorship-based platforms, where sponsors donate temporarily or over an extended period to cover survivors' basic needs (*e.g.,* single night or monthly housing, transportation, groceries, clothing, courses) for a low-cost subscription fee for victim-survivors. Particpant Three emphasized that professional moderation and confidentiality are required for such service: *"We [service providers] would be in charge of it of course" and "[housing] stays anonymous, they don't know where the building and locations are"* P03, F, Counselor. The donor-matching model was intended to not only support victim-survivors financially but also to help overcome mainstream administrative barriers, such as the need for documentation and proof of address for victim-survivors to qualify for financial assistance.

Lastly, to foster accountability and resilience for both the victim-survivor and abuser, the concept of community *pods* was proposed. A pod involves relationships "between people who would turn to each other for support around violent, harmful and abusive experiences, whether as survivors, bystanders or people who have harmed. These would be the people in our lives that we would call on to support us with things such as our immediate and ongoing safety, accountability and transformation of behaviors, or individual and collective healing and resiliency" (Mingus, 2016). Participant Five elaborated on this thought by sketching a tool where 1) survivors can track their case progress, name the harm they experienced, involve community members, and help manage resources to support their wellbeing and healing, and 2) community members learn how to support and hold accountable both the survivor and abuser in dealing with abuse (Picture 4).



Picture 4: Participant Five's Sketch of Survivor's Personal Management Tool.

Participants expressed serious concerns around their suggested interventions, including computer literacy, access to technology, and the learning curve of adapting new tools. Privacy and safety are critical in crowdsourcing and sponsorship models, where exposure to harm can occur through abuser stalking or exploitation of contractors who provide their services to victim-survivors (*e.g.,* landlords). Designing for mezzo-level interventions requires profound expertise to understand and address triggers and biases[19] and careful consideration of how to portray victim-survivors without reinforcing stereotypes. Additionally, such interventions can be overly ambitious considering the reality of the human service sector, where resources are depleted, and employees are overworked (Kulkarni et al., 2013).

5.2.3. Macro-level Interventions

Macro-level interventions influence a larger portion of society, public policy, legislation, and institutions. In the findings, macro interventions focused on involving the broader community and promoting collaboration between key stakeholders (*i.e.,* Muslim service providers, faith institutions, and mainstream service providers).

Social workers emphasized the need for DV advocates and faith leaders to proactively encourage and prepare the larger community to understand DV signs, learn about available social services, and how to offer help within their immediate and broader circles. Participant 21, a survivor and DV advocate, suggested a "train the trainers" model[20], where appointees across the community can direct victim-survivors towards adequate local resources, which decentralizes imams as the primary points of contact.

[19] Several organizations have been working on training materials (*e.g.,* the Peaceful Family Project resources) that can be redesigned and disseminated.
[20] P21 was trained through an advocacy program offered by the city of Dayton, OH, where community members are trained to offer resources and a safe place for victim-survivors.

Participants suggested reaching community members through a dedicated WhatsApp hotline or education modules integrated into social media platforms.

To overcome technology access barriers, internet hotspots and portable devices for houseless populations across cities were suggested: *"It's hard to keep track and stay connected to certain houseless individuals because they are constantly moving or changing location, so something that doesn't require that you constantly have something on them but it's an instant type of connection"* P05, F, Program Manager. Mobilizing technology access is crucial in cases where victim-survivors are deprived of access by their aggressor or lose their homes because of the abuse. On a broader level, faith leaders and social workers called for "building bridges," where a collaborative relationship exists between members of faith institutions, Muslim service providers, and mainstream service providers:

> "The perfect relationship would be if we have the religious expertise and leadership coupled with the therapeutic expertise and tools in that dynamic and they work in conjunction with each other" P19, F, Mosque Liaison.

Interviewees highlighted the responsibility faith institutions must hold in actively engaging with DV coalitions and service providers to build faith leaders' understanding of DV and services layout and establish a working relationship where open communication exists between all key stakeholders to provide joint and holistic interventions for survivors (Xiao et al., 2022).

Building bridges among various stakeholders not only helps in serving victim-survivors better but also in empathy building and minimizing biases, as P10 passionately narrates:

> "… sometimes it's just being with people, it's like "oh they're not that different!" or "I know someone who's Muslim, or I know someone who's Jewish" …that's what builds the sense of engagement, builds the sense of empathy, and then folks are not so strange…when we care it's not that hard." P10, F, Social Worker.

Cross-cultural interactions build a shared cultural understanding, where differences are minimized and commonalities are amplified across groups, nurturing a culture of care that is greatly needed in serving at-risk communities.

Participants' concerns about macro interventions were mainly around policy obstacles (*e.g.,* the difficulty of integrating law enforcement into collaborations with nonprofits and mosques). Also, the fear of reinforcing systemic injustice through technology (*e.g.,* tech surveillance (Media., 2020)). Lastly, the difficulty of incentivizing service providers who are consumed with a heavy workload or community leaders who do not see DV as a priority to change their practices.

Addressing challenges on a macro-level requires long-term, localized, and ongoing advocacy. Thus, I see technology as a supportive tool in interventions (Brown, Ayo, & Grinter, 2014a) and outreach, not as a replacement for on-the-ground advocacy work. By designing on a macro-level scale, I align with the SCTJ value of community transformation, where underlying conditions of oppression and harm are addressed through social and systemic change.

5.3. Conclusion

In this study, I investigated Muslim victim-survivors' challenges in their help-seeking and healing processes in the United States. I co-collaborated with participants to exhibit the possible roles technology can take in minimizing their obstacles. The study finds that victim-survivors are often revictimized by their immediate

communities and the criminal justice system. It empirically showcased when and why using a Survivor-Centered Transformative Justice (SCTJ) approach may be productive as a theoretical and design lens, and demonstrates how SCTJ manifests in design by targeting three group-level scales of intervention: micro, mezzo, and macro-level design interventions.

Based on this work's findings, in the discussion chapter, I discuss ways to center victim-survivors through supporting their harm reduction strategies, equipping them to make informed decisions, holding abusers and community members accountable, and laying the grounds for social and systemic change to undo behaviors and conditions upholding DV in marginalized communities. Supporting the parties involved in DV dynamics while protecting victim-survivors can be challenging and may not align with universal human rights or designers' values. However, I argue that navigating the social, legal, and structural landmines with the least harm is through centering survivors' autonomy and supporting their decision-making process.

Chapter Six: Survivor-Centered Transformative Justice Principles in Practice and Design

Survivor-Centered Transformative Justice (SCTJ) aims to establish healing structures that promote justice-making processes for victim-survivors and their communities by working within current structures to build foundations of counter-structures, where harm is minimized, healing is promoted, and resources are not discarded but rather improved. Healing is a continuous process of "mending as well as building power, resilience, and resistance to deal with ongoing oppression" (Five, 2007) and pertains to creating more choices for individuals and communities to respond to current situations rather than be limited by past experiences. Building healing structures includes collective, customized mechanisms (advocacy, accountability, and transformation) executed concurrently to keep the survivor afloat with the goal for them to thrive through support and healing. SCTJ emphasizes that establishing accountability and creating a supportive infrastructure by reforming community norms and practices, institutions, and laws is necessary to achieve justice for survivors. Without addressing the root causes and conditions perpetuating abuse, isolated advocacy efforts will likely be overridden by the pervasive influence of harmful praxis and systems. The ultimate goal of SCTJ is to create comprehensive infrastructures, including within technology design and research, that prioritize equity, provide comprehensive services to ensure human safety and dignity, and effectively address harms through non-punitive measures.

In the following empiric sections, I illustrate participants' practices, preferences, and design choices and introduce three social mechanisms of healing structures relevant to HCI: 1) Survivor advocacy, which focuses on responding to survivor's immediate and

long-term needs to heal. 2) Community accountability, which promotes acknowledging harm, reparation, and behavioral change for abusers and enablers of abuse. And 3) Community transformation, which focuses on reshaping the broader conditions perpetuating abuse through preventative work, breaking generational trauma, and structural and systemic reform. Within each section, I highlight how participants described computing technologies' roles in their practice and how they imagined such technologies ought to be designed to center survivors. I couple these technologies and design insights with expert judgments, critiques, and insights.

6.1. Survivor-Centered Advocacy in Practice and Design

I define survivor advocacy as prioritizing the needs, choices, and healing of survivors by centering their experiences and empowering them to make decisions that align with their autonomy. Survivor advocacy involves collaborative efforts among advocates, service providers, and community members to support, empower, and help survivors heal from trauma and rebuild their lives, through providing information, resources, and services, and advocating for their rights and needs. Survivor advocacy is an essential process within SCTJ that considers advocates, service providers, and community members' perspectives in research and design related to responding to victim-survivors. In the data, on-the-ground efforts focused on survivor advocacy. In this section, I highlight the key mechanisms that facilitate survivor advocacy: 1. Safety and Empowerment, where the victim-survivor's immediate and ongoing safety from harm is addressed through safety planning, trauma-informed care, and supportive spaces; 2. Informed Decision-Making, where the victim-survivor sets goals and experts communicate all possible decision outcomes; 3. Harm Repair, where work is done with

survivors to help reach their goals by rebuilding their self-esteem and mental health and taking ownership of their actions; and 4. Care Continuity, an ongoing process that aims to bridge the gap between the needs of victim-survivors and their ability to access appropriate services.

Survivors are empowered to make decisions about their abusive situations when they feel heard and have clear, pragmatic options laid out for them. Survivors overcome the fear and decision-paralysis resulting from the abuse (Van der Kolk, 2022) when they work with experienced guides or experts who have the humility to understand survivors' needs, set survivor-centered goals, and guide survivors to reach their aspired destinations. Survivors can develop resilience and healthy responses and make progress towards their goals when they take responsibility for their actions and work towards resolving their trauma. Survivors can find the courage to change their situation when they do not have to endure discriminatory practices, endless service searches, and retelling their stories. Lastly, survivor-focused advocacy plays a vital role in preventing the shame survivors often feel when seeking help from community members, leaders, and organizations, and the disregard shown towards their circumstances, contributing to a healthier healing journey.

6.1.1. Safety and Empowerment

In this section, I will demonstrate how, within the context of design, safety leads to empowerment; by addressing the victim-survivor's immediate and ongoing safety from harm through trauma-informed care practices, safety planning, and supportive space arrangements (Center, 2015; Protocol, 2014). Trauma-Informed Care (TIC) is an approach that responds directly to the effects of trauma and "emphasizes physical,

psychological, and emotional safety for both providers and survivors," creating opportunities for survivors to rebuild a sense of control and empowerment (Protocol 2014). Safety planning refers to preparing for possible current or future abuse (Hotline, 2023; C. E. Murray et al., 2015). And supportive space arrangements include temporary or long-term accommodation away from the abuse.

The initial point of contact is a crucial moment in the victim-survivor's journey to healing, usually initiated when most vulnerable and enduring the consequences of abuse. Being overwhelmed by the help-seeking process, feeling shame, unsafe, or threatened, or finding possible outcomes to be more severe than their current situation commonly leads victim-survivors' hesitation to proceed or return to the abusive situation (Cross, 2019; Nolet et al., 2021; Oyewuwo-Gassikia, 2019; Rabaan & Dombrowski, 2023). When victim-survivors interact with competent resources through rebuilding trust, gaining understanding, and equipping themselves with tools to recognize and prepare for abusive patterns, victim-survivors can overcome obstacles such as fear and shame and envision and work toward alternative futures.

Victims-survivors are often in vulnerable positions. Thus, telling their story to strangers is a mentally and emotionally laborious task, and can be a harmful experience for many (Oyewuwo-Gassikia 2016, Hammers 2019, Rabaan and Dombrowski 2023). Participant 13, a survivor, explains the social obstacles of dealing with the abuser, the mosque, and the system:

> "Navigating these systems [police, legal] is extremely hard because the abuse doesn't stop with your abuser only, it continues. Where you're abused by the whole system. Where you're not [aware] what the laws are, what the rules are, what your rights are, what can you do? You're pressured from so many places. And it's very hard because survivors a lot of times, they're literally coming out of

> a relationship where they didn't have a voice, and so being able to voice is very hard… it's just a very intimidating process." FG6_P13, Victim-Survivor.

Muslim victim-survivors face numerous social and systemic complexities that commonly lead to revictimization and retraumatization (Rabaan and Dombrwoski, 2023). Expert participant (EP01) explained how speaking up is a privilege:

> "There are so many factors that determine what you can speak up about, and when and how and what resources you have access to, to support you when you speak up. So, let's also be considerate of all these complex complexities. Not every woman can afford to speak up when she wants to, despite how crazy it might be. Every survivor who is in a dangerous situation deserves to be supported, regardless of her choice, whether to speak up and leave or not." EP01, Survivor, advocate, helpline expert.

In the case where victim-survivors can and do seek assistance, service providers prioritize immediate physical safety. EP07 showcases how justice manifests in ensuring the victim-survivor's safety during the in-take process they follow at their organization:

> "It starts from believing them, and I think that's the most important part of that transformative justice journey. That journey starts from, 'I called someone, and they believed me. They immediately sent the Uber to pick me up or they sent me to a hotel'." EP07, Housing and Procurement Manager for DV survivors.

EP07 demonstrates how service providers offer trauma-informed care and survivor-centered approaches to addressing abuse while actively listening to the victim-survivor and validating their emotions. The value of a trauma-informed care approach, as EP07 frames it, is in allowing service providers to empathize by looking beyond their own experiences*: "trauma-informed allows you to step [into] the other side of the mirror and look inwards and see what's happening".* To provide adequate care, everyone from administration to client-facing roles to finance undergoes trauma-informed training at EP07's agency, coupled with applying a transformative justice lens to implement mechanisms that may reduce harm and promote healing.

During these initial processes of interacting with survivors, DV professionals safety plan by identifying and de-escalating triggers, recognizing warning signs of abuse, outlining options to change the victim-survivor's situation, creating a plan for leaving the situation or seeking help, locating safe places to go or people to contact and potential sources of support, and avoiding unsolicited advice. Safety planning aims to empower domestic violence victims to take control of their safety and make informed decisions about responding to abuse (Protocol 2014, Murray, Horton et al. 2015). Safety planning strategies include securing legal documents, saving money away from the abuser, and rehearsing possible abusive scenarios that may arise in the future to prepare and equip the victim-survivor for when the abuse escalates or when they decide to leave. Participant Two recognized the value of her counselor's approach in predicting and preparing for future abuse by her ex-partner:

> "I, at one point, had a counselor, a mental health counselor who told me, my ex was going to hit me, and I said, 'there's no way he would ever do that!', and he came very close. But what her point was, is that I needed a plan, what are you going to do?. And I carried through with that [plan] because I felt threatened." P02, Survivor, Advocate

Prioritizing victim-centered safety planning and role-playing various scenarios can help the victim-survivor gradually overcome their fear and hesitation and be better prepared when they are ready to make further decisions.

Lastly, safety and empowerment are facilitated through supportive spaces, which afford safe, peaceful, and reorienting spaces to preserve victim-survivors' dignity, provide physical safety, and boost mental clarity and decision-making. Examples of safe spaces include respite shelters (*i.e.,* temporary housing). Participant 15, both a survivor

and service provider, emphasized the significance of temporarily removing herself from her environment to make critical decisions about her abusive marriage:

> "There was a lot of chatter, including my family saying, 'hey, what are you doing? Where are you going? Where did you disappear?', all these things, and a lot of cultural pressure. So, in a huge way, I was really blessed that I didn't have to constantly hear that and really clear my head and have professionals around me that were able to help me navigate what I wanted."

Participant 15's experience seeking help became a "blueprint" or model for the ideal process she strives to replicate in her advocacy work and recommends to others who want to support survivors. Despite going through abuse herself, working at a culturally competent domestic violence organization at that time allowed her to access practical support and care. However, she acknowledges this is a privilege and not the norm for Muslim victim-survivors.

Now I will transition to showcasing technology's role in DV practice and how participants envisioned possible technologies to support survivor advocacy. To preserve the victim-survivor's safety, service provider interviewees used technological workarounds. During the COVID-19 pandemic, advocates guided their clients to use safety features on their phones (*e.g.,* emergency calls on iPhones, which are not reflected in call logs) and found technological workarounds to seek help. For example, if the victim-survivor cannot access a phone, P21 suggested:

> "If you have kids at home, and let's say, for example, your husband takes your phone from you, you can't call out or talk to anybody. If you set up a Google account, you cannot call 911, and we couldn't stress this enough with clients, you cannot call 911 from Google voice. But what you can do is text, let's say you're going to take my phone away from me. Okay. I'm going to go help little Timmy with his homework. You go onto little Timmy's school iPad. And then through that, log in to Google Voice. And that way, you can text your sister, your mother, your friend, your neighbor, 'Things are going south, please call 911 ASAP' or use the code word" P21, Advocate.

Despite such workarounds, technological limitations exist and require social support to effectively carry out safety planning, which is not always an option for victim-survivors who have been intentionally isolated by their abusers.

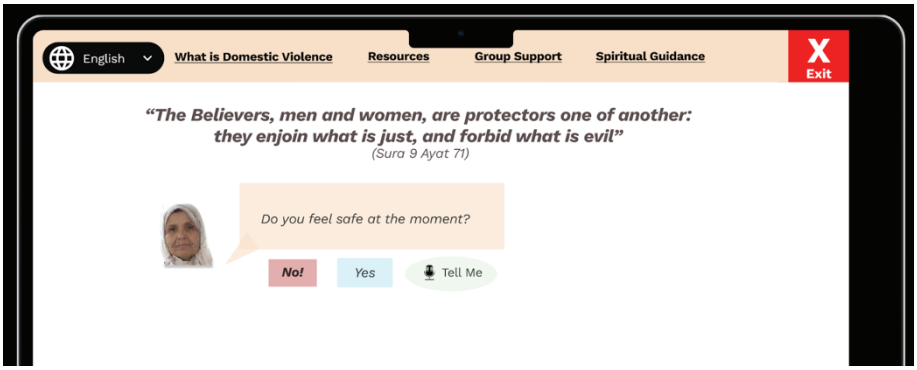
In designing for safety, participants underlined the urgency of immediately finding a competent and responsive contact. Where *"the plan and access to help must go hand in hand"* P03. Such work requires community effort over technological advancement, where:

> "The hope is that a plan could be made by community members volunteering to set up a system to evaluate and assess the needs of victims. And that once assessed, action could be immediate if need be. The speed of assistance could be enhanced with technology. Ongoing contact, planning, and assessment of needs could be facilitated through expedited communication via mobile application or in a virtual environment. Depending on the severity of the situation, delays in no way benefit the victim." P04, Survivor and Advocate.

Third spaces in design can take the form of online forums or groups centered around particular topics, allowing individuals to post anonymously and engage in candid discussions about their issues. Several participants expressed appreciation for participating in the focus group we held, viewing such sessions as supportive spaces bringing people together, being listened to, and for exchanging tips and resources. While several participants recognized the need for secure online spaces, both P07 and EP07 have raised concerns regarding the transformative potential of such spaces, particularly in resolving trauma and driving ideological and situational change. Thus, designing for sustainable impact is critical when thinking about SCTJ technologies.

After aggregating technological suggestions from all our focus group discussions, I translated the underlying values into design concepts. To design for a trauma-informed interaction (Chen et al., 2022), safety, and empowerment, I prototyped an interactive

desktop webpage (Appendix B), intended as a landing page for Muslim victim-survivors who are trying to identify an abusive situation and seek assistance (Picture 5). The website aims to provide a dignified connection where survivors' feelings are acknowledged, validated, and respected. I included multi-language options, soft colors, a friendly tone, and spiritual-based text condoning abuse to set a welcoming feel. Inspired by our participants, the website service embodies an in-person interaction where an older motherly figure with a soft look offers care, wisdom, and help. To account for safety, I added an exit button, asked the user if they felt safe during the initial interaction, and provided shortcut buttons and multiple input methods for a swift interaction (*e.g.,* text input for victims who are in the presence of kids or the abuser, and voice for immediacy).



Picture 5: Prototype Landing Page.

The experts' evaluations were encouraging overall. However, several concerns were raised, including the need for representation and inclusivity, specifically around aesthetics. Experts were concerned about excluding other skin colors and ethnicities:

> "The only thing missing is the diversity in terms of the people. In terms of ethnicity of people, the colors of people. You want to kind of speak to different groups of people and not just Arab Muslims" EP01, Advocate, Academic, Survivor.

One expert pointed out that having such an image may trigger trauma in cases of in-law abuse because:

> "Mothers-in-law, in particular, are often implicated at least indirectly in domestic abuse. Older women not doing anything because it happened to them, and they think it's normal. So, I think this is a tricky one. If you want to be trauma-informed, how do you make this seem like a person? I mean, maybe any kind of person could be a trigger for someone. But I think being aware that the singular assumption that a motherly Muslim-looking figure that's also, I guess, generically brown, how does this look for black women who often get erased from these conversations already?" EP02, Academic Scholar

In addition, the importance of accessibility and portability was highlighted, such as creating a mobile-friendly version for individuals who lack laptops but can use their phones to access the tool. Content-related concerns arose around the need to address a wide range of scenarios, including those involving minors, male victims, and sexual harassment. Experts also recognized that abusers might use such tools to further their control, calling for the need to account for technological abuse through this tool. Lastly, experts identified the need for incorporating localized legal content, resources, and services and acknowledged the complexity of constructing such content.

6.1.2. Informed Decision-Making

Informed Decision-making is the aspect of setting goals with survivors based on their needs, clearly communicating possible outcomes of each decision, and helping them overcome their hesitancy and fear to reach their goals. Participants 21 and 22 exemplified that their role as victim-advocates is to provide options:

> "Let's talk it out; what are your different options? So based on what you're telling me, these are the different paths that you could take right now. And in addition to explaining the paths also what the outcomes and what those processes look like."

Such a process involves trusting the client's intuition in what works best for her circumstances and working together to help reach the client's desired outcomes.

Informed decision-making provides options that re-equalize power dynamics through gaining knowledge (*e.g.,* educational content, religious and legal rights), working with reliable resources (*e.g.,* services, spiritual guides, therapists), and being supported to reach empowering goals. While abuse is about power and control at its core, it is burdensome for victim-survivors to be ordered into making decisions, as P13 explains:

> "A lot of times you go to community or people as well, and you're told to be a certain way or do a certain thing, go talk to him or leave him or do this. And that puts the victim in the same situation where somebody else is actually making decisions for them instead of them being able to make that decision for themselves. Which can be unempowering."

To avoid overwhelming victim-survivors or risk relapsing or withdrawing from seeking help, it is important to introduce actions in small, gradual steps. Otherwise, they may decide to return to their abuser without receiving reparations. Participant Two suggested integrating real-life scenarios, similar to the ones presented in the interview, into design:

> "If you could break that story down into tiny bits and then make it a 'choose the next option, what would you do? And then what would you do?' as a teaching tool … if you want to teach people, make them act it out" P02.

In addition to gradually presenting survivors with possible options, helping survivors in decision-making is by transparently showing the outcomes of each choice, as P02 emphasized:

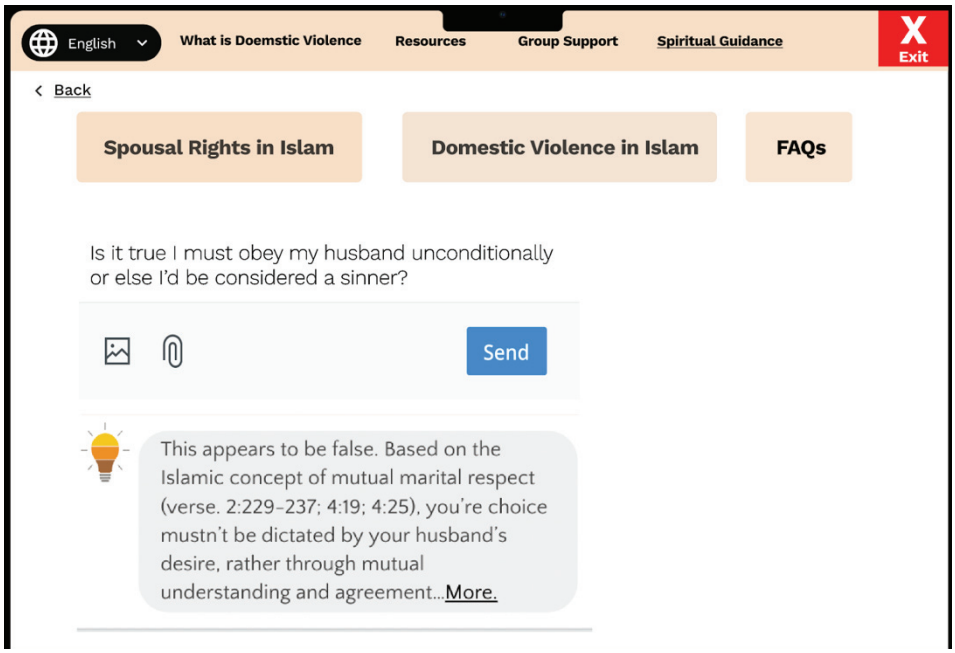
> "There are many layers to abuse, and by talking through choices, you bring to light what would otherwise be hidden, you balance the power dynamic between all of the players. Why is this important? Because sometimes part of a power dynamic is the anonymity of keeping things hidden or behind closed doors." P02.

According to the participants, having a realistic understanding of the available options and legal and religious rights is crucial while setting reasonable expectations to minimize stress and prepare survivors for the journey ahead. Managing expectations regarding what can be provided by the system and community can help prevent frustration for victim-survivors and service providers alike. Although determining accurate expectations can be challenging, given that each case may vary depending on those in positions of authority, exploring potential scenarios can help reduce negative outcomes.

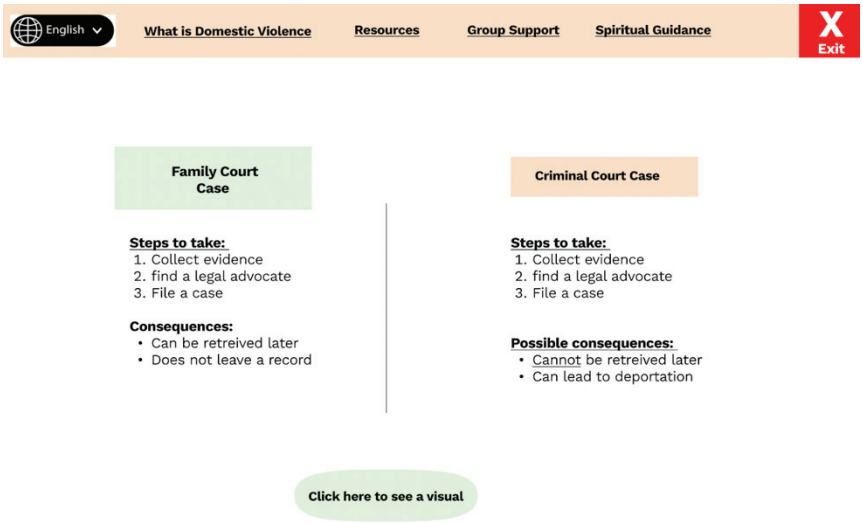
To design for informed decision-making, Participant 11 suggested using ephemeral short videos to inform victim-survivors:

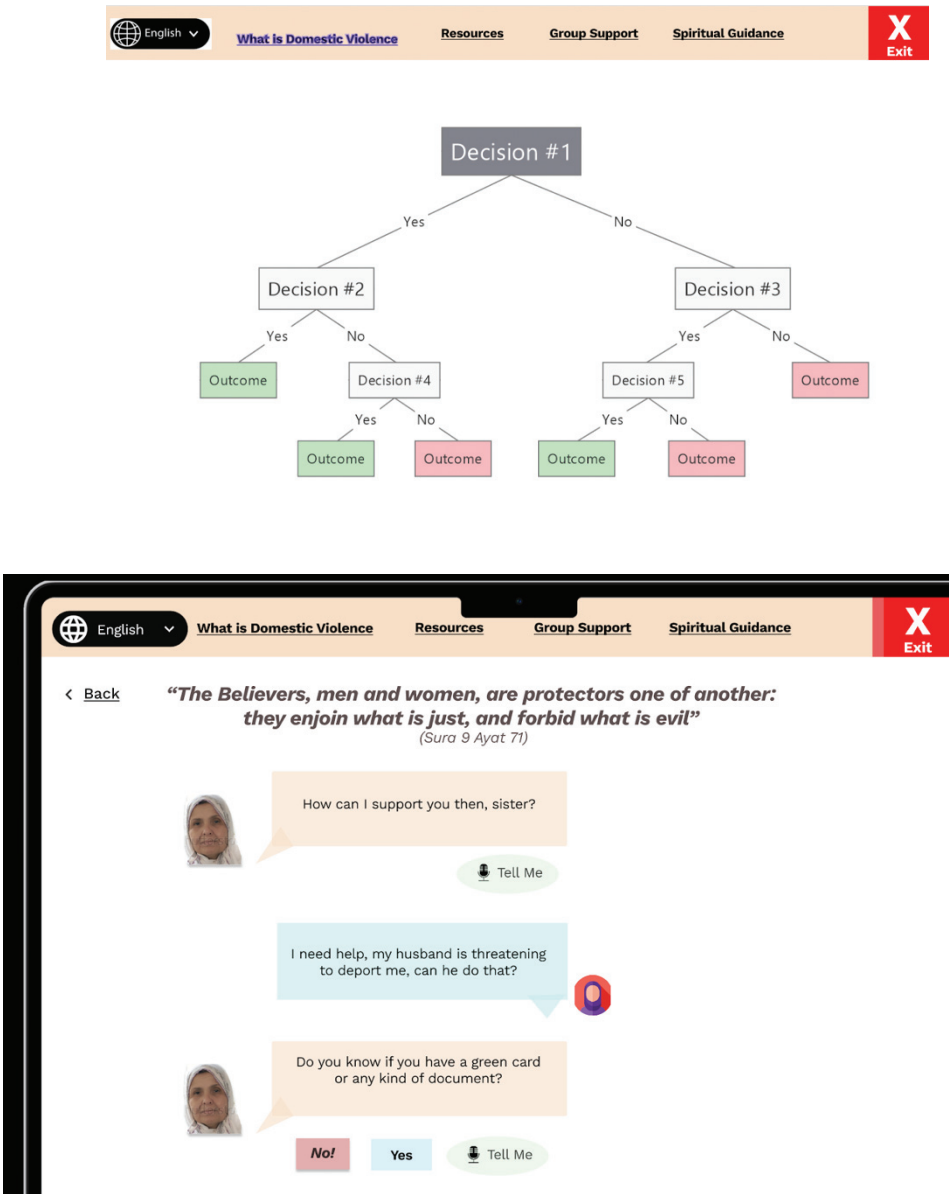
> "You have reels nowadays, or stories, short videos, two-three minutes [of] quick advice. It would be great where if she just had like two minutes, her husband is in the bathroom, she just wants to know, "is this normal?" And she watches it quickly, and then it disappears. That would be great!" P11, Advocate, Mosque Affiliate, Survivor

Other ways participants thought of design as a way to support informed decision-making is through specific tools for convert women for religious knowledge, to avoid the risk of imams or spouses falsely using religion as way to promote their personal agendas. In the prototype (Picture 6), I allocate space to verify religious information and rights around abuse; when a user asks a question, answers that are rooted in Islamic feminist interpretations of spousal and human rights are provided.


English
What is Doemstic Violence
Resources
Group Support
Spiritual Guidance
Exit
Back
Spousal Rights in Islam
Domestic Violence in Islam
FAQs
Is it true I must obey my husband unconditionally or else I'd be considered a sinner?
Send
This appears to be false. Based on the Islamic concept of mutual marital respect (verse. 2:229-237; 4:19; 4:25), you're choice mustn't be dictated by your husband's desire, rather through mutual understanding and agreement...More.

Picture 6: Design Concept - Spiritual Guidance.





Picture 7: Design Concept - Visual Legal Information.

Further, the prototypes showed visual graphs of legal outcome examples of taking one option over another. Experts found this to be valuable and restated the need for local content, as states differ in their DV-related laws. In response to (Picture 7), EP03, who is a social worker and works in legal services, expressed:

> "I was happy to see a question about legal… I've actually had a woman ask me the question and use our legal plan coverage to be able to talk to an attorney about whether or not her husband could deport her. So that has really happened…I'm not a fan of Google JD, [that is] people using Google as a lawyer to get legal

> advice. Because the legalities, the statutes, and things are different in different states and provinces, and so sometimes people wind up getting guidance virtually that does not really apply to them. But I like the idea, I like the recognition that there are legal issues, and that these things do need to be addressed… maybe something basic, but then direct them to affordable legal services."

EP03 suggested that an alternative way to account for localized legal content is to provide basic information and refer the user to affordable legal services.

The participants' insights enlightened me about the in-depth knowledge and expertise required and the complexities encountered to center survivors' needs while supporting their ability to learn and reach decisions. Despite these challenges, some participants left me optimistic, suggesting this work is achievable through collaboration with service organizations and advocates, with technology design as the mediator that brings together all relevant knowledge bases.

6.1.3. Harm Repair

Harm repair refers to the process where trained professionals work with survivors to rebuild their self-esteem and mental health and take ownership of their actions to help reach their goals, whether through living with or away from the abuse. Participant 16 highlights the important role of providers in this process:

> "Many survivors are already in a position where they don't feel empowered. So they're just showing up at a place and it really becomes the provider's job to start helping them find that level of confidence again. Because oftentimes they've got abused psychologically, emotionally, all these aspects, and were really broken down. So, this is a very delicate situation." FG7_P16, Service Provider, Survivor.

As a consequence of acute abusive situations, cases of secondary aggression may occur where the person who has been abused reacts violently to the assault and, as a result, become a secondary offender. Participant One, a facilitator in a center for

nonviolence, facilitates and supports secondary abuse victims to ultimately change their mindset and behavior to live a life of nonviolence by ingraining that:

> "They can live a life of nonviolence, that it is a lifestyle, a choice that you make today. It is a growing process to live a life of nonviolence. And then also how to reteach nonviolence to their children, because as we speak to them, we let them know that violence is a learned behavior. It is societal. It is intentional. It is in every part of our society. It is the foundation of our society. And so consequently then, we are only acting within what we see, we mimic what we hear" P01, Survivor/Advocate/Service Provider.

By understanding the effect society and the system has on people's behavior and tolerance toward abuse, beliefs can be unlearned, which is a core principle of SCTJ. Participant One takes it further by guiding her clients to challenge authority figures and relearn the positive value of negatively perceived emotions, such as anger, as strategies to help identify uncomfortable situations and stand up for injustice.

During the COVID-19 pandemic, P01's consultation sessions were transitioned to a virtual environment over Zoom, which P01 found was mainly engaging and fruitful. Here, P01 recalled an online interaction among the support group:

> "One woman just last week told another participant, 'I want to challenge you to do this and this and this for yourself. Not for him, he doesn't even matter. We don't care anything about him. You're the one that matters to us.' Oh, wow! In this space, to have that feeling and to feel that within yourself, because whether or not we're here or whether you're sitting over there, spiritually, things transfer. The mental, emotional connection is going to happen no matter where you are standing at, because you're standing here in this venue…what we are transferring through that emotion when we experienced each other in this virtual setting is really the biggest key."

Despite the profound experiences P01 has had among her groups, P01 stipulated that to communicate effectively on video conferences, *"The person has to have their face up, they can't be off-screen. And if I see something happening in their demeanor, they're moving about, or they're not paying attention, I can call them to account for that."*.

Expert participant EP01 finds virtual reality games to be a way to enhance the online experience by simulating in-person experiences where physical gestures are transposed to interacting avatars, in addition to the possibility of monetizing their interactions through building landscapes and trading on the platform. In her personal experience, she has been on a virtual simulation game for over 12 years, strongly connected to colleagues and eventually meeting her life partner and spending four years as a married couple virtually before living together. Though P01 is a strong proponent of virtual reality environments, she expressed her concerns about the learning curve required and the potential predatory harm people may experience in virtual environments.

When it comes to repairing harm, it is crucial to address practical needs such as transportation, childcare, medical support, and financial assistance, as one of the expert participants candidly stated when asked about the type of support survivors require from their communities:

> "I think believing survivors. And then putting our money where our mouths are in actually supporting survivors. Because they do need to be believed that's profoundly important, but they also need actual support, because abuse always has an economic dimension to it." EP02

Lastly, to adequately provide justice for survivors, survivors' social and political participation is essential in influencing sustainable change rather than short-term solutions. Participant Four shares her public participation experience:

> "There are panels with DV survivors as a way to catalyze donor support, 'tell your story'! [which] commodifies the story itself and kind of dehumanizes the storyteller or the process, they become sort of trauma puppets on stage telling their story. So what does that actually do? … the resources should be holistic, but I think also the perception of survivors needs to be multi-dimensional humans. In my case, I'm a diplomat, I'm doing this and doing that. I'm not the sum total. I had been told on panels… 'we don't want to hear your policy ideas, we just want to

> hear you tell your graphic detailed story,' so we can sort of have like performance almost." P04, FGM Survivor, Diplomat.

Unfortunately, survivor participants expressed feeling tokenized and politicized, with their stories being shared solely for fundraising purposes, reducing them to their circumstances and making them feel like objects of charity rather than individuals with a full range of experiences. The contrast of tokenizing survivors is holistically repairing harm through actively involving survivors in DV-related decisions and policy making.

6.1.4. Care Continuity

Care Continuity refers to an ongoing process of providing survivors with care and addressing the disconnect between their needs and their ability to access resources and services that attend to those needs. This involves assigning a single point of contact to accompany survivors from the moment they seek help, through the accountability process, and afterward by conducting periodic check-ins regardless of whether they choose to stay or leave. Care continuity is a concept in social work and medicine that entails "people seeking formal care should experience a seamless relationship with the entity providing it" (Tseng et al., 2022). In the context of DV survivor advocacy, care continuity aims to reduce the likelihood of survivors having to repeatedly recount their stories to various individuals and service providers, which can trigger the trauma they experienced, often caused by the absence of a centralized point of contact. Participant Two, a previous nurse and current DV advocate, explains care continuity in her nursing role:

> "I had to coordinate between the social worker and all the outside doctors… I was like the fulcrum of the teeter-totter. Everybody's on either side. And when I'm building my nursing care plan, I'm taking every need of that patient that I'm advocating for into consideration."

Having a central advocate is influential in finding the right resource, keeping everyone involved up-to-date, and: *"Giving them [survivors] choices and helping them to see that it's okay to take them."* P01. P02 added:

> "Even being willing to walk with them, like [P01] said, if you're tapping the imam then he needs to walk with that person. Yes, he needs to walk with them. If it's Artemis Center, they need to walk with them. Literally, the lady, who was an ex-police officer, walked me to the court to get a restraining order. Yeah, she walked there with me! I'm a big girl, but it takes that extra bit of support. So, empowerment, choice, support. And she didn't tell me I had to do it. She did say this is an option." P02

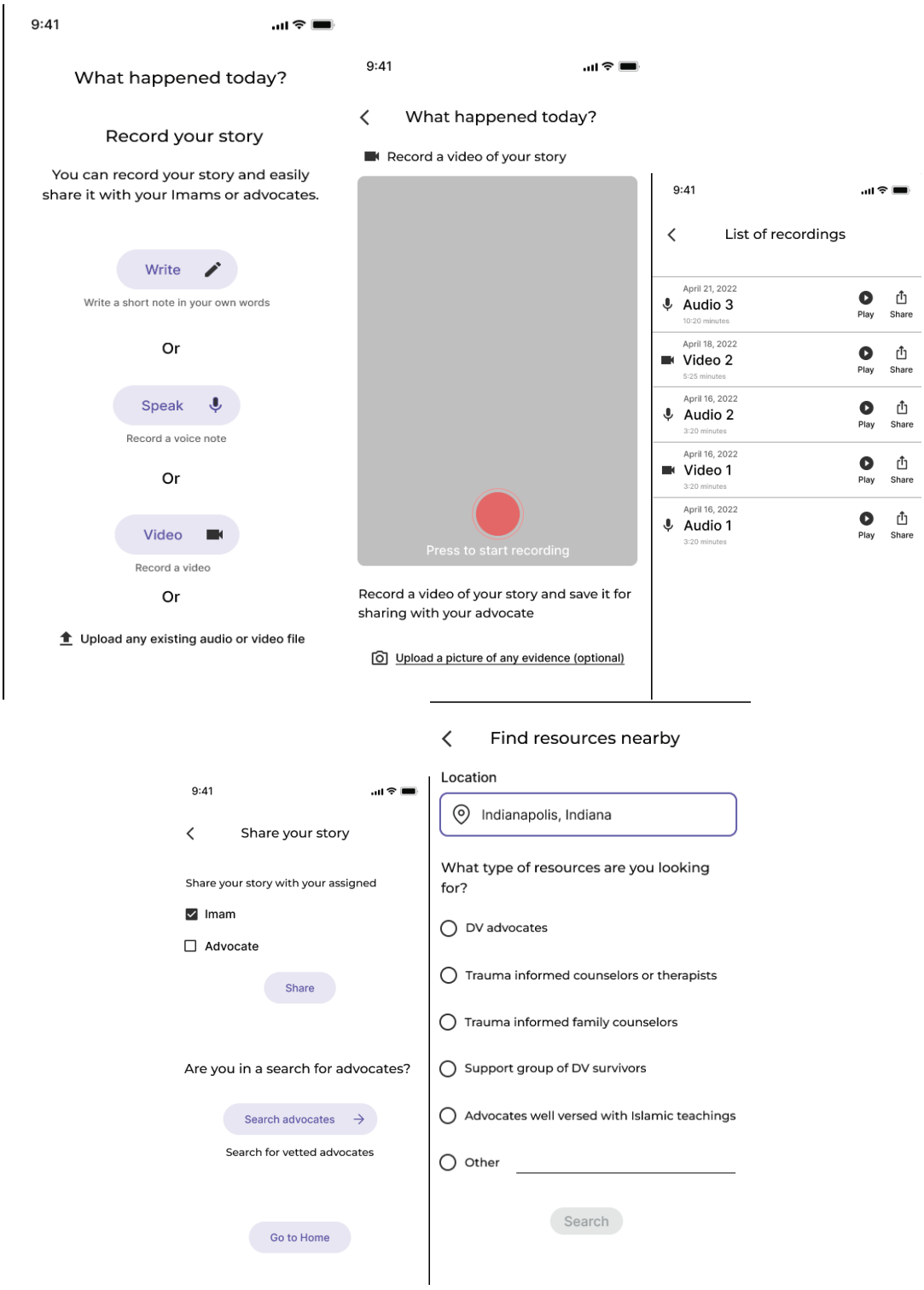
Continuity of care also manifests as a feeling of community support, where members collectively stand by the victim-survivor, as P12 revealed in her experience:

> "I wished that there was more community support in the mosques and within the women's community. I wish that there was no shame in talking about these issues. I did go to an agency, and I felt like, at that time, the agency was very cookie-cutter and was just providing resources related to legal support, or it felt very formalized. So I felt a lot of shame in accessing even that service because it felt like less of a community effort, and it felt more stigmatizing to go." P12, Survivor and TJ Advocate.

Integrating continuity of care in DV-related interactions helps minimize discomfort and protect from possible social and structural harms, where having a competent advocate, ally, or group walk through the process with the survivor builds a system of checks and balances, especially when interacting with imams or mainstream service providers. Here P10 shows the power of an equipped supportive team:

> "She needs a support team, a team of people, predominantly women, who are there to each take a piece of the burden so that it's light, and each works on a different aspect of it. Somebody works on the legal advocacy side, somebody works on the financial side, somebody works on the spiritual side, somebody works on the mental health side. So at least four people to be able to address all these different areas. And that doesn't mean they do the services. That means that they get those services and make sure that they are the follow-up for her." P10, Survivor, Advocate, and Service Provider.

The aim of care continuity is to reduce the burden on victim-survivors and prevent them from repeatedly recounting traumatic experiences with multiple individuals during the challenging process of seeking assistance. In an attempt to address this issue, I proposed a mobile tool (Appendix B) that enables victim-survivors to document incidents of abuse through written entries, audio recordings, or video recordings. The documentation can then be shared, either in its entirety or parts, with trusted advocates, counselors, or religious leaders selected by the user (Picture 8 shows examples of the interface.) In addition to the ability to find verified local resources, the mobile application prototype is intended to facilitate case management for advocates and community leaders, enabling them to monitor cases and connect with available local resources as needed. The survivor advocacy values this tool adheres to are: 1) Care continuity, where users tell their story once and have a seamless interaction with one point of contact rather than being redirected to different professionals and retelling their situation repeatedly, 2) safety, where the resources recommended (*e.g.,* imams, therapists) are vetted by survivor allies (*i.e.,* advocates, service providers, and survivors themselves), and 3) empowerment, where survivors can find allies and support.



Picture 8: Design Concept - Mobile Application.

According to the expert participants, the tool above saves leaders and service providers time and effort by enabling victim-survivors to access the necessary

information and resources before reaching out to community leaders or advocates. However, expert participants provided recommendations and raised critical concerns regarding the tool's safety measures. Several features were recommended to improve safety, including prioritizing responsiveness from services and individuals upon request, allowing users to save copies of legal documents, and tracking who has viewed certain information to prevent information leaks. Additionally, participants suggested incorporating ephemeral reporting, one-time verification code authentication, and masking the user's identity and location information from professionals until a bond of trust is established prior to any intervention. To vet the enlisted resources, experts proposed a checklist of requirements that must be met, including certification or proof of training, signing an agreement, enforcing penalties if clauses are broken, and utilizing existing networks of service providers to verify if the person or service added is indeed compatible and safe. One way to build credibility and encourage users to reach out to enlisted resources is to show service providers' and community leaders' credentials and responsiveness levels. Lastly, recognizing that victim-survivors may be unable to tell a coherent story due to trauma, experts suggested trauma-informed features of offering writing prompts and providing space for reflection.

Survivor-centrism in advocacy is vital in reducing harm, here P02 summarizes what advocacy entails from an SCTJ perspective:

> "The structures within society matter. The quality of our lives has everything to do with how safe we feel, our choice and ability to get and have our needs met at all levels, our access to resources, how empowered we feel that our choices matter, how much support we have or perceive ourselves to have, etc. Now that living near extended family isn't so common, this likely means building networks in our communities to meet the needs of their members, but done in a way that the

> individuals with needs are asked what they need and included in the decision-making and community-building process." P02, Survivor and Advocate.

For SCTJ processes to flourish and be effective, they must be executed simultaneously. As EP05 stresses:

> "I don't think that it makes sense to have [advocacy] processes that are devoid of accountability, inclusive of pressing charges to the fullest extent possible and ensuring that these things are taken very seriously. And that's something that I think is important to understand. Nobody has the right to create that harmful living situation for someone. And what it all is coming down to is a dynamic of power that they are seeking to exert over somebody who does not possess as much power and relation to them. And then breaking that down. There is a need to understand that there are some people who will go to whatever extent to exert that power." EP05, Community Leader and University Chaplain.

Immediate and long-term work must be done to break the patterns of abuse. Breaking patterns of abuse only happens through changing the root causes and conditions perpetuating abuse (*i.e.,* community, structural, and systemic harm) through accountability and establishing an infrastructure that supports victim-survivors, which includes reforming community norms and practices, institutions, and laws. Otherwise, advocacy efforts done in isolation will be subdued by the power of harmful praxis and systems. Next, I demonstrate ways to encourage accountability for individuals who enable abuse by directly inflicting harm or indirectly through complicity.

6.2. Community Accountability in Practice and Design

I define community accountability as the process of encouraging abusers and enablers of abuse (*e.g.,* leaders, community members) to acknowledge the harm they caused or enabled, take responsibility to repair that harm based on the survivor's needs, and ultimately, commit to nonviolent futures.

Though changing abusive habits within enabling systems and cultures is problematic and hard to achieve, this section outlines several practices to promote accountability. I emphasize "promoting" accountability rather than enforcing it, as accountability requires an individual's willingness to acknowledge harm, receive support, and make changes. Primarily, abuse accountability is contingent upon respect and trust towards the parties involved (*i.e.,* community members, leaders, and organizations) and cannot be forced by the community. I identify three accountability-promoting mechanisms: 1. Communal Intervention, where community members collectively approach the person who has done harm; 2. Structural and Social Abuse Intolerance, where strict measures are taken against abuse and healthy relationships are actively promoted socially and institutionally; 3. Community Members Support, where people who have done harm are equipped with services and resources needed to help change abusive behaviors and practices.

6.2.1 Communal Intervention

Communal interventions involve community members collectively working to approach people who have done harm. To achieve collective action, community members need first to overcome the rampant denial of DV (Hammer 2019, Rabaan and Dombrowski, 2023) as EP02 explains:

> "Communal accountability is about communal awareness and a communal willingness to acknowledge that there is a problem. And so much of my own work is sort of asking or is investigating how that awareness is accomplished. And a portion of it, and we all know this, but I want to sort of formulate it too, is a reluctance to acknowledge the problem because once we do as communities, we may actually be responsible for doing something about it.". EP02, Academic Scholar in Islamic Studies and DV.

While recognizing the prevalence of domestic violence in a community can accelerate countering it, allies and advocates, along with their networks, are actively making extensive efforts to encourage abusers to take responsibility and promote accountability within their communities. Upon the victim-survivor's consent, the accountability process often begins by identifying or establishing allyship with community leaders and influential members whom the abuser trusts or respects:

> "If there's somebody that he [the abuser] respects, an elder that he will listen to and trust, maybe getting that person involved to speak on behalf of his wife. A lot of times these type of abusers do not care what women say and they discriminate against women, so we're getting a man that can speak to him one-on-one that he looks up to, or that he trusts and respects to acknowledge his mistakes. But as I said getting abusers to change is not an easy task." P22, Service Provider.

Commonly, religious authority figures are trusted community members who take the role of approaching the abuser. However, other male authorities or influential figures are also considered. This is consistent with previous research on the role of male allies in DV dynamics within patriarchal structures (Rabaan, Young et al. 2021, Rabaan and Dombrowski 2023). Expert participant Three, an experienced social worker and marriage consultant, emphasizes the need for supportive men in marital partnerships:

> "I think when men see that a woman has men who have her back, even if they're good men…it will make them think a few times before because they know she got a dad, she got a grandfather, she got uncles, she had brothers, and they don't take that mess" EP03, Social Worker and Marital Counselor.

The involvement of allies is essential in the accountability process as they provide support to the survivor, encourage the abuser to take responsibility for the harm caused, collaborate with both parties to address the harm done, and sometimes exert pressure on the abuser to stop the abuse and comply with the survivor's requests. Participant 11, a

community advocate and mosque affiliate, articulated her frustration with abusers possibly changing their behaviors:

> "In my experience, the person who is abusing to that extent…either they have very deep-rooted or deep-seeded mental health issues or personality disorders, which does not allow them to acknowledge that they have done that harm… so in order to keep themselves protected, they make up all of these structures around themselves… therefore sadly, I've not seen anything except threat work, threat of community coming to know about it, the threat of losing their children, or threat of losing money, or threat of the government." P11, Community Advocate.

To be a competent authority ally in our context, it is essential to possess various traits. Besides being trained in addressing DV and well-connected to resources and services that serve and support help-seekers' journey, being self-evaluative is crucial. Both religious authorities (EP04 and EP05) in our expert interviews highlighted the need to know their limitations as part of their roles and responsibilities:

> "When you appoint yourself in an authority position you have to start by disciplining yourself first before you do that to others [inferred from Islamic heritage]. So whenever you are faced with something, you have to evaluate yourself, 'Is this something that I can do? I'm qualified to do it?'. Everyone knows their limits [and] their capability… that's the first thing that I think in this matter as a person, as an Imam, as a sheikh, [is] to be honest with yourself. That's number one. Number 2, I think in any community, you have to have [the] right people or experts to also be part of the community where they can also evaluate things not just an Aalim [scholar]. I'll give an example; in my community I have like five different elders who have been in this country for so long and they have also been very educated people and well-experienced. In marriages sometimes I bring them, so they can share the expertise" EP04, Community leader.

In addition to knowing whom to consult with and how to delegate the victim-survivor's needs to competent people, EP04, who has been a religious authority for over 20 years in the same community, relies on a group of wise people to evaluate and assess if he is fit for such responsibility:

> "In some kind of cases I do consult, because [of] their age, their expertise, and also their experiences. So now these people, they can also be a source of

> evaluation for the Aalim (scholar), that if he's qualified in this honor, and then that can also be used to choose if the [Imam] should be taking care of this or not." EP04, Community leader.

The benefits of community leaders having a supportive group have been raised numerously by participants as an effective way to advocate for survivors and hold authority accountable.

Lastly, an ally intentionally uses their gender privilege or authority position to condone abuse publicly and encourage individual and community accountability, as P02 points out:

> "I think one of the things that's harmful in society in general, is that guys say one thing when they're in a co-ed situation and then they say something entirely different when it's all boys. And I think we need men that are willing to stand up and say, 'guys that's not what I think about women, I really don't. I'm not going to stay here if that's the way you're going to talk', we need people willing to get up and stand up for what they believe in." P02, Survivor and Advocate.

To design for allies, participants suggested using technology to create a vetted volunteer allies' network available online for victim-survivors or advocates to support them in approaching abusers. The rationale is to account for women who do not have relatives or trusted allies in their immediate network or community. However, P12 cautioned against having a group of strangers approach an abuser because *"it doesn't actually hold someone accountable. It just produces more shame and it is just like dogpiling onto somebody as opposed to actually holding them accountable, which is something that can usually happen within the trusted relationship or trusted folks."* Participant 12's concern aligns with the SCTJ principle of not creating further harm through retributive actions.

Community accountability interventions aim to repair harm mainly through mediation sessions. During mediation sessions, the facilitator (usually an imam) listens to

both parties, reaches a resolution (whether reconciliation or separation), and creates an action plan which entails mechanisms of repair that are collaboratively formed with the harm doer, agreed by the victim-survivor, and monitored by the facilitator.

Mediation is not a straightforward process, in one case, which was eventually deemed successful by participant (P11), who was advocating for a community member at the mosque, P11 worked hand-in-hand with the imam. The imam was initially reluctant to get involved in convincing the abuser to show up and listen to the victim-survivor's points. Eventually, the imam succumbed, and after multiple failed attempts on behalf of the advocacy team and bearing the abuser's hostile attitude toward the advocate, refusing to be in the same space as the advocate, the imam invited P11 to stay in a different room where she can act as a live consultant via text messaging:

> "[the Imam] was listening to the conversation and he would text me, 'what do I say now? Now, tell me what do I say to refute this, or how to counter this argument?'…because I knew the whole story from the person that I was helping. She was also in the room; they were having like a mediation meeting. So when he would say something to her and then she wasn't able to respond, I needed to be there as her counsel…basically I was being her voice in the whole thing by telling the Imam 'he hasn't said that, he's hiding this fact, here is the fact that he didn't tell you.'... Those are the kinds of things we were just kind of texting to and fro and he was getting the information from me and then refuting that." P11, Community Advocate.

The imam and advocate collaborated seamlessly as a team during the mediation session, working towards the common goal of encouraging the abuser to take responsibility for their actions and make a commitment to end the abuse:

> "The Imam used me, and I used the Imam. Imam said: 'P11 is going to talk to the whole community. She's going to share everything that you're doing. And you don't want to have that happen because that's a public shaming for you. I can't stop P11 from doing it.' I was okay with that. I said I am going to do it. If he doesn't stop this, then I am good. Speak to people that he knows I'm going to talk to his friends, I'm going to bring it in the men's committee" P11, Community Advocate.

Multiple factors contributed to the success of this case, the advocate played a crucial role in getting the Imam on board, prioritizing the victim-survivor's wellbeing over her ego (*i.e.,* by adhering to the abuser's request to leave the room), and voicing the victim-survivor's needs throughout the process. Also, the Imam's role was significant, especially considering that the abuser was not a regular attendee of the mosque, as the abuser eventually agreed to participate in the mediation process due to the respect the Imam attained in the community. Lastly, the Imam's trust in and inclusion of P11 ensured that the victim-survivor's voice was heard, and needs were met, which would have been compromised otherwise. These various factors working in harmony led to the case's successful resolution. As per EP04, an imam's responsibility is not to dictate actions but rather to assist both parties in devising a plan. Expert Four finds such an approach effective because individuals are better aware of their capabilities, rather than externally imposing obligations they cannot fulfill, and it promotes accountability through autonomy, where individuals commit to what they themselves propose.

Mechanisms to influence harm doers to acknowledge their harm include using faith-based knowledge to condone and address the abuse, and a value-based approach by demonstrating the costs and ramifications of abuse based on what the abuser values (*e.g.,* financial and legal consequence, children's wellbeing, social or professional reputation, religiosity). For example, in the case where P11 co-mediated an accountability session with the Imam via text, she emphasized that the reason the Imam's role was influential was:

> "Not because the Imam was a religious figure, but because he was a leader in the community, and he had a lot to lose from losing face in the community, because

> he [the abuser] was well known to the community members and his clients. He depends on the community for his livelihood." P11, Community Advocate.

Participants distinguished between individuals who have the potential to take responsibility and change and those who do not, emphasizing that narcissism is a challenging condition to influence, and therefore pressuring abusers with consequences might be more appropriate and effective. The purpose of the community accountability process is for people who have done harm to reach self-awareness and define justice according to the community's values, which is a fundamental tenet of SCTJ.

The final aspect of accountability concerns the reintegration of abusers into the community after undergoing the accountability process. Participants held varying opinions on whether abusers should be reintegrated, and in this regard, EP05 provides guidance on how to develop a reintegration plan:

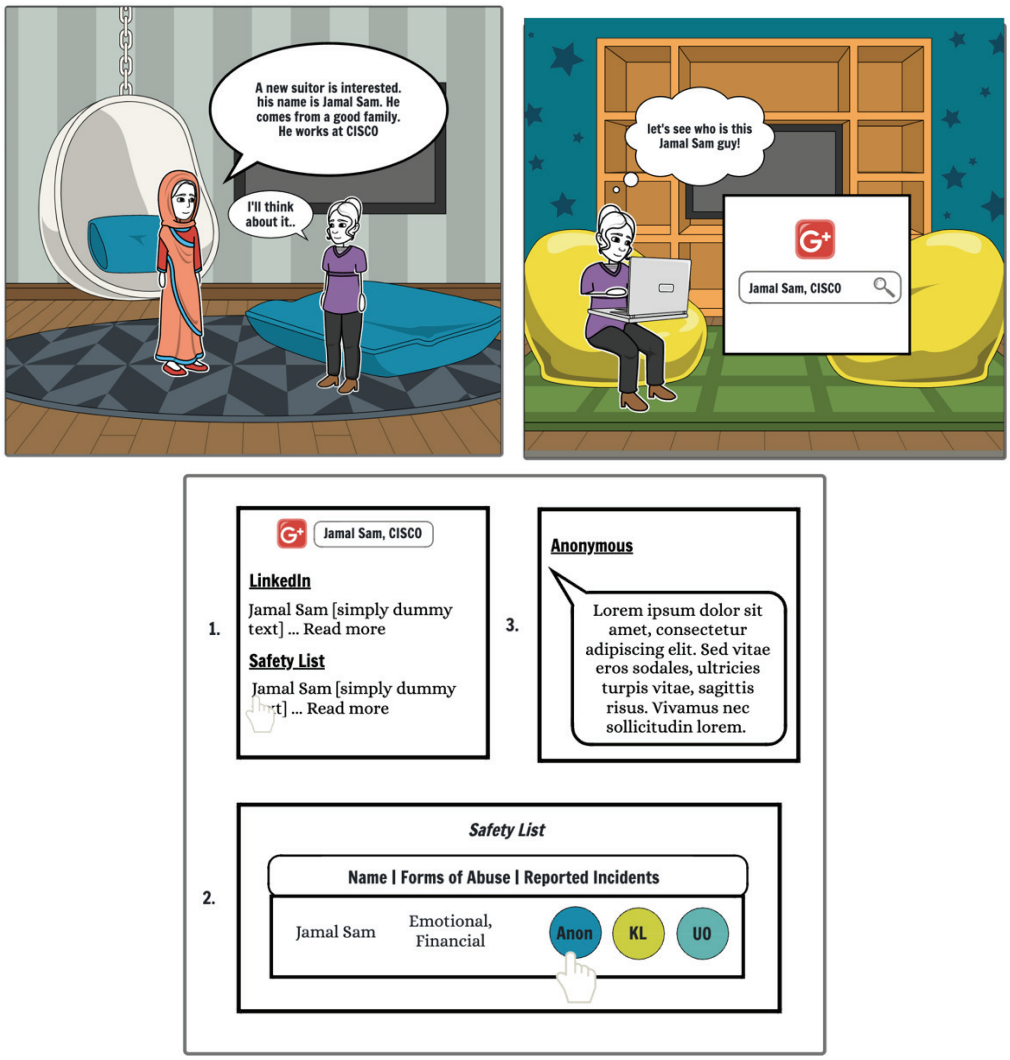
> "If they [survivors] are in a place where they say, 'I don't want to press charges, I want to move away.' This person [the abuser] is in a place where they are still now a part of the community, there has to be a recognition. Well, how do you deal with that person? Do you ban them from the community? Do you sit down and say to them 'there is zero tolerance of this, we are aware of what you've been doing and what you've done.' And each of those things needs to have specific policies in place. And I think they need interdisciplinary groupings that create and craft those policies, so that people are understanding from a legal circumstance, what's their liability here. From a religious standpoint, what's their responsibility to God. From a human standpoint, you have social workers, therapists, counselors who can help to recognize what's the real impact on others." EP05, Religious Authority Figure.

Collaborative efforts among policymakers, service providers, and faith leaders are still lacking in formulating an effective and comprehensive plan to address the social implications of abuse in the context of US-based Muslim communities (Rabaan and Dombrowski 2023).

To use technology in holding abusers accountable, multiple participants suggested a centralized database for perpetrators where victim-survivors can report abusive individuals and pass on the information to potential future partners. Here I view part of a focus group conversation:

> "P22: in terms of accountability, if there was a place where women could report what a man has done to them, whether or not they are in a relationship. And then if a person, if a man has been reported, say strike three, you are out! and then have a database where it tracks how many times a person has been reported.
> … P18: I mean, they had sex offender lists and pedophile lists. They should have a perpetrator [list]!
> P22: exactly like a domestic abuser list."

Several participants echoed the need for a safe and secure tool that allowed for anonymity and privacy in reporting. Among the prototypes, I proposed a use-case scenario storyboard (Picture 9), for a public perpetrators database and their offenses reported collectively either anonymously or by their chosen initials, as seen below:


A new suitor is interested. his name is Jamal Sam. He comes from a good family. He works at CISCO
I'll think about it..
let's see who is this Jamal Sam guy!
Jamal Sam, CISCO
1.
Jamal Sam, CISCO
LinkedIn
Jamal Sam [simply dummy text] ... Read more
Safety List
Jamal Sam [simply dummy text] ... Read more
3.
Anonymous
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed vitae eros sodales, ultricies turpis vitae, sagittis risus. Vivamus nec sollicitudin lorem.
2.
Safety List
Name | Forms of Abuse | Reported Incidents
Jamal Sam
Emotional, Financial
Anon
KL
UO

Picture 9: Design Concept – Storyboard.

By speaking to the experts, the values this tool manifests included accountability and women empowerment in making an informed decision prior to potential marital commitments. When asked about any established accountability processes within the Muslim community, EP02, who has been studying gender-based violence in the Muslim community for over a decade, highlighted that accountability is often informal and lacks public acknowledgment. Also, both EP02 and EP06 stated that many abusers are serial abusers and serially married. Thus, several experts found the proposed tool to help

facilitate marital background checks and embody a virtual whisper network, particularly for converts and isolated immigrants:

> "They [converts] have no whispering networks, and they have no access to this communal information that maybe is out there. And so (they) need particular support and being plugged into what the women in the community are talking about, like the Imam you don't want to be in the same room with by yourself, or the guy who has asked every eligible woman to marry him." EP02, Academic Scholar

Converts or individuals from outside the community are often overshadowed by long-standing members through gatekeeping, where access to knowledge is intentionally controlled by individuals (Theory., 2018). In this case, gatekeeping is driven by underlying patriarchal beliefs prioritizing protecting a man's potential to marry over publicly acknowledging the harm he has caused, even though withholding such information may be more detrimental to a prospective spouse.

Although benefits of the suggested public reporting tool were recognized, it was also the most controversial design among the proposed three. There were differing views among the experts, with some expressing appreciation for the potential of such a tool, especially for vulnerable women who may not be fully integrated into the community, and for the possibility of using it as a centralized database to be incorporated into dating and matrimonial websites. On the other hand, some experts expressed concerns about the potential for this tool to cause harm, especially for marginalized groups whom the State or racist groups may target. There is also a risk of reinforcing harmful stereotypes and potential targeted slander. Expert Participant One suggested the following measures to reduce harm in such a design:

> "It has to be verified. And again, no matter what you do, people are always going to abuse certain things. At the end of the day, it just depends on having some sort of a moral code at the beginning, saying, 'consider the consequences of what

> you're about to report, whether it's true or not, that's between you and God'... And it could be something else, giving the [reported] person a warning… maybe say that this has been reported, we're giving you a warning your first time, second time, or third time, then you're going to be registered in the system as an abuser. Because it's also giving people a chance to reconsider their actions before judging them or at least labeling them." EP01, Advocate and Survivor.

Another significant concern was the need to protect victim-survivors from potential legal repercussions. To address such concerns, experts suggested writing guidance prompts for posts and reports, flagging potential liability-related claims, or having an independent entity review and manage reported incidents. Lastly, I recognize this reporting tool to be the least aligned, and perhaps conflicting, with SCTJ's principle of pursuing non-punitive actions in encouraging accountability, requiring further thought into minimizing public reporting while serving the purpose of such a tool, that is warning individuals from encountering abusive partners (*e.g.,* private social media circles where information is preserved from public search queries and reports are diligently verified.)

6.2.2. Structural and Social Abuse Intolerance

Social and structural intolerance of abuse refers to the societal and institutional rejection of abusive behavior and the active promotion of healthy relationships, including institutional practices and cultural norms that prioritize victim-survivor safety and promote abuser accountability through normalizing structural and social survivor support.

Service providers ensured specific measures were implemented in routine activities such as medical checkups and court hearings. For example, medical professionals conduct regular screenings for abusive behavior during medical check-ups, which "*is a step in the right direction but it's not adequate"* P08. To improve medical and social services, P02 raised the need to: *"normalize what most people are going to*

need and then make sure that they have every opportunity to get there." The participant here is referring to paving the way for survivors to overcome social and logistical obstacles in receiving care, which includes ensuring:

> "[the service] is free, you have transportation, the time is a good time, it's not a mealtime, it's not a time when the husband's just coming home from work, they need to consider all aspects of it. They go get all the other refugee women so that they're with other women. And they build in the class a chance for the women to socialize amongst themselves. They can reassure the men that it's a ladies-only class so that we're not having them exposed to the men per se if that's an opportunity, but then they have a chance to learn, and then use what they learn, and then socialize." P02, Survivor, Advocate.

Participant Two used the cultural nuance of gender segregation to covertly sustain victim-survivors' support. Mobilization efforts such as providing transportation, childcare, skill-building, and language learning, help normalize the identification and discussion of abuse, reduce the level of control the abuser has over the survivor, and expand the survivor's available options. Another example of an advocacy measure that led to accountability is in a case EP07 witnessed where family members enabled abuse by prioritizing their reputation over their daughter's wellbeing due to the fear of being shamed by their community for having a divorced daughter. In this case, the victim-survivor could only proceed with public accountability against the abuser and her own family, when advocates backed her in court. Here EP07 explains the potential ramifications had the survivor returned to her abuser:

> "It doesn't mean that we ended up holding him accountable, but we were able to make a survivor out of someone who would have gone back and just lived in silence or 'till death, whichever came first."

Family members, in-laws, and community leaders enabled abuse by encouraging the tolerance of abusive behavior, providing advice that prioritizes their interests over the

needs of survivors, and taking the side of the abuser and, at times, blaming the victim-survivor.

On average, survivors of domestic violence return to their abusive relationships seven times before leaving for good (Hotline., n.d.). Victim-survivors have reasons for not wanting to end their relationship, which may include concerns about their immigration status, shared parenting responsibilities, fear of retaliation after leaving, or a desire to repair the relationship (Cross, 2019; Nolet et al., 2021; Rabaan et al., 2021). To reduce harm during the period when victim-survivors return to their spouses, social workers have implemented structural measures such as mandated home visits:

> "Sometimes we'll step in and check on them in the home, even if the abuser's there, just to let them [spouses] know that we are watching, and we're still a support for her, even though she decided to go back home. Also, what we did with some particular clients is before they go back to their abuser, we will have multiple counseling sessions with a trained provider to kind of ease things back and make new stipulations for the marriage." P19

To promote accountability and facilitate the transition when survivors decide to stay within the abusive relationship, professionals or authority figures facilitate the survivor's return through counseling sessions, establish new boundaries for the relationship, and continue to check in with the couple as they continue living together. During these sessions, the abuser has the opportunity to express remorse and discuss areas for change. While this approach varies depending on the dynamics of each case, having an Imam involved in the process can be beneficial.

Imams or faith leaders have considerable influence due to the power and authority they have within communities and are often the first contact sought by DV victims (Hammer, 2019; Karamah., 2015). Although I did encounter several instances where imams provided support, survivors of domestic violence often encounter imams who lack

the necessary skills and knowledge to effectively handle such situations (Hammer 2019, Rabaan and Dombrowski 2023). Thus, holding imams accountable is a fundamental piece of community accountability.

To safeguard against harm from religious authorities and community leaders, advocate participants extended support to imams to ensure they offer competent advice. While others used strategies to influence resistant imams in supporting victim-survivors adequately, such as invoking Islamic knowledge to defend the survivor's position, restating the imam's responsibilities, confronting the imam's biases, and subtly threatening to involve law enforcement by benefitting from the community's unease toward involving the State to serve the survivor:

> "I've said, 'listen, you don't want to involve the police. You don't want it to bring shame on the community if the police are involved, and you don't want to drag the community into the public. I know when these kinds of things start going out, the media [gets] involved. Do you want that to happen? we should not let that go out.' And usually, Imams don't want things to go out and are very conscious about the reputation of the Islamic community...I would use all kinds of assets [for] the Imam to play a stronger role, simply because the Imam has an authority that I don't have" P11, Community Advocate.

Participant 11 leveraged the imam's authority and influence within the community to promote positive change and support for victim-survivors. Further, by emphasizing the importance of preserving the community's reputation, P11 attempts to appeal to the Imams' sense of responsibility and encourage them to take effective action in addressing domestic violence within the community.

Sociotechnical interventions around structural and social abuse intolerance by the participants included founding an organization focused on reporting abusive community leaders. Participant 10's organization investigates and publicizes reports of abusive

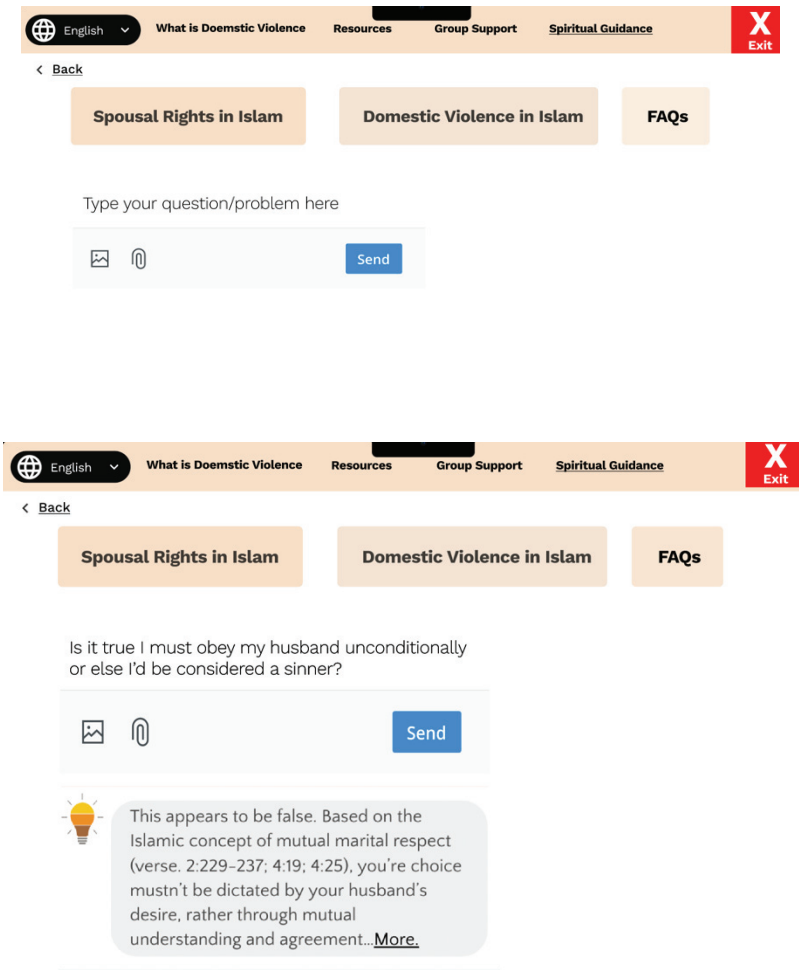
authority figures reported by survivors on a dedicated online platform. Other ways participants addressed the issue of public figures who abuse their power are by de-platforming them from social media to minimize their reach or countering their messages with other influential imams who prioritize justice through live or recorded media.

The proposed webpage tool (Appendix B) contributes to community accountability by integrating interactive, gender-equal interpretations of Islamic texts related to abuse, drawing from Islamic feminist knowledge. The Spiritual Guidance section (Picture 10) is designed to provide users with the necessary knowledge to confront abusers or imams who misuse religion as an excuse for abuse instead of a deterrent. In response to the above tool, participants with expertise in Islamic feminist knowledge recognized the importance of reclaiming a space for such knowledge to counter the overwhelming presence of patriarchal scholarship on the internet. Nevertheless, EP02 acknowledged the difficulty of establishing such a space:

> "My concern about the spiritual guidance stuff is always the "In Islam" piece. Because when you want to address an important issue, you have to be determined and certain in a particular way. You have to communicate certainty. And so, for an anti-DV organization to say, "God does not want domestic violence" is very, very powerful, or the "Quran is against domestic violence", it's a really powerful thing. The problem is that Islam is not a toolbox. There are so many different interpretations of things…but it's really important to be very intentional about how that is communicated. How the certainty of a survivor-centered harm-reduction-focused interpretation isn't undermined by pointing out that it's one of many interpretations. But it's also not presented as the only option. Because I think in one way, that might be helpful and really critical in a crisis situation, but I think it also infantilizes victims to say we're just going to tell you what's right." EP02, Academic Scholar.

Achieving a balance in conveying certainty of information can be challenging. On one hand, during crisis situations, providing easy access to information without overwhelming the user with conflicting answers is crucial. On the other hand, presenting

only one interpretation as certain may result in survivors feeling disempowered and their agency being taken away. Instead, it is crucial to communicate knowledge in a way that empowers survivors and allows them to make informed decisions while pushing against the patriarchal religious narrative. Next, I showcase the final community accountability section which involves supporting abusers as part of the accountability process.



Picture 10: Design Concept - a conversational agent that offers spiritual insights promoting gender equality.

6.2.3. Community Members' Support

Within the accountability process of SCTJ, community members' support entails professionals, other community members, and designers providing the resources and support needed to help people who have done harm to encourage changing abusive behaviors and beliefs. To promote behavior change, abusers need help acknowledging the harm they have done, as P09, who works in an organization that holds religious leaders accountable, explains:

> "Whether they have owned up to their actions makes all the difference for what happens next. The thing to consider, in my opinion, even with an app or without an app, is do they have people around them who can help them come to that point of owning up?" P09, Survivor, Advocate, Service Provider.

When people who have done harm show interest in receiving support to redeem themselves, the premise that advocates, professionals, and community members are working with them and not against them must be conveyed early in the process to encourage accountability and transformation.

Currently, there are Batterer Intervention Programs (BIPs) nationally supporting abusers to change their behavior by addressing the root causes of the abuse (*e.g.,* challenging sexist beliefs) and learning healthy relationship skills (IV, 2020). However, participants repeatedly mentioned the absence of culturally relevant and effective BIPs, where abusers can receive support from professionals who understand the nuances of their situations and provide a safe and supportive environment:

> "Courts utilize batterer's intervention whether we like it or not, whether we think it's effective or not, but if we have Islamically relevant batterers intervention I do believe that that would be more effective. Because I think that there are cultural and religious aspects to [abuse]…especially if somebody thinks that it is religiously permissible to engage in this behavior. So if they're going to batterer's intervention at their Masjid, and then they're encountering an Imam that's saying, actually this is not permissible and here's the scripture that tells you that, then

> maybe it will change their mind rather than if they're in a mainstream secular space with just a psychologist, they may not be willing to take that in because they're still thinking, you're telling me this psychology mumbo-jumbo, but what I believe spiritually in my core says otherwise." P07, Community Member.

Participants 21 conducted thorough research and discovered culturally-based batterer intervention programs are non-existent. They expressed an interest in creating such a program under a more welcoming name, such as a *"healing circle for persons causing harm."* Here, P09 suggested using technology to support abusers in their journey:

> "[an] app for people who've been accused, [with] different steps that they can take, for people who are ready to go onto that journey, maybe like a collective online support group."

Participant Nine continued to suggest the possibility of having online guided education or courses as an alternative to the traditional batterers' intervention program groups in DV-related work, and voiced her concerns about the potential negative impact of technology being used in isolation and its consequences:

> "You really need community, and you need people around you to encourage you and push you in the right direction. This is very solitary, but people are also able to find that in solitary, it's just a lot harder, I think, 'cause you're really wrestling with yourself. and even to download this app would take some kind of willpower or acknowledgment that something was wrong." P09.

Participant 21 echoed the notion of needing community support and more of a healing circle than an intervention program, where *"they have a brethren of folks that are sort of connected and willing to help".* Participants recommended using a balanced approach to encourage change, being mindful of not shaming the abuser and instead using grace and directness, emphasizing the need to treat individuals who have committed harm with respect and dignity, and not allowing preconceived notions or judgments to cloud one's perception of them. In practice, P05 intentionally avoids looking at an individual's charges or paperwork to prevent forming biases, the reason being:

> “Because I realized they need some compassion because they'd been through the court system, they'd been through it with their families, a lot of them by that point in time their families will have cut them off, a lot of them didn't have anybody, they were at a lonely place. A lot of them were there post-prison, and so they needed some compassion.” P05, Service Provider.

In more practical terms, participants suggested stabilizing abusers' financial means to support their recovery since they often face stressors such as job loss.

When thinking about supporting abusers through technology, P12 pointed that when it comes to accountability:

> “It's not about technology, it's about the relationship that you have with somebody. If you have a relationship with somebody that's trusted, that can hold you accountable, that trumps what platform you're using.” P12

Accountability is an intensely human process, making it a delicate endeavor to replicate through technology. Further, participants warned against support spaces turning into environments that enable abuse, where individuals justify and support each other's abusive behavior. To prevent enabling abuse in online support groups, P12 proposed having sessions moderated by professionals experienced in working with batterers, and P11 suggested implementing different levels of access to the support space, where abusers start in a one-on-one space with an expert and are later:

> “Allowed or given access to a support group only after they have reached a specific point of self-awareness, then they can go into this community of reformed abusers, not start off by being in that community” P11, Survivor, Advocate, Mosque affiliate.

Technology alone cannot effectively support individuals who have caused harm and may jeopardize the worsening of the situation. Therefore, the involvement of skilled professionals and leaders is necessary for any platform designed to support such individuals.

Lastly, experts raised ethical concerns around the difficulty of measuring harm and the efficacy of the accountability processes overall:

> "For one person, a certain type of psychological abuse can be more devastating than physical injuries. How do we even know where are the boundaries around? What abuse is? and in some ways, is the experience of abuse in the eye of the beholder and the eye of the survivor? Is it that some people are abusers but don't realize it? so [they] don't realize the harm that they're perpetrating. Really, honestly, the longer I do this, the harder it becomes. It is so much murky, messy. I wish the world was ethically that simple." EP02, Academic Scholar.

While the goal of an accountability process in SCTJ is for the person who has caused harm to commit to a non-abusive future, activists recognize it may not always be attainable. However, reaching one of the initial stages in the process, such as ending the abusive behavior or assuming responsibility for their actions, can be a significant achievement in the DV context (Interventions, 2012).

Next, I briefly highlight mechanisms that may contribute to changing communities into autonomy-supportive environments for survivors by addressing broader violence-enabling conditions.

6.3. Community Transformation in Practice and Design

As an SCTJ principle, community transformation consists of the practices done to reshape and, ultimately, transform the "social conditions that perpetuate violence including systems of oppression and exploitation, domination, and state violence" (ELK, n.d.). The goal is to shift power toward collective liberation and community-level healing. In the case of US-based Muslim survivors, systems of oppression include patriarchal, racist, and Islamophobic systems, where policies and entrenched practices and beliefs produce and sustain unfair treatment and oppression, leading to detrimental health, legal, and social consequences (Braveman, Arkin, Proctor, Kauh, & Holm, 2022;

Rabaan & Dombrowski, 2023). Though participants shared plenty of ideas and approaches that aim to change perceptions and behaviors around abuse, the data on community transformation practices are less empirically concrete because of the underfunding of the service sector. When resources are depleted, the primary focus of domestic violence organizations becomes addressing the immediate needs of victim-survivors and their families, and less on outreach, research, and political engagement.

In our data, community transformation practices mainly revolved around: 1) Prevention, where detrimental consequences of abuse are anticipated and accounted for in advance; 2) Breaking intergenerational violence and trauma through ways to disrupt and reshape habits and beliefs; 3) Structural and systemic reform, by improving current structures, outreach, connecting services, and informing policies.

6.3.1. Prevention

Preventive work anticipates and protects against harmful consequences of abuse, aiming to change the social conditions contributing to abuse to prevent future occurrences. By instilling healthy relationship models in younger generations, naming abusive behavior as serious and intolerable harm, and acknowledging community traumas and their influence on social habits, communities can be transformed into healthier environments for victim-survivors to heal and recover.

One root problem in communities and institutions, as identified by participants, is the varying perceptions of what accounts as abuse:

> "We're all working off of a different definition. And like I said, if the men see abuse as physical and they're like "I didn't do that," we're not working off the same definition, so you're not even aware that there is a problem because your way of defining the problem invalidates the other person's perspective." P02, Survivor, Advocate.

Participants aspired to unify what constitutes domestic violence and its different forms across community members, institutions, and systems, as a fundamental step to encouraging the community to perceive abuse as a serious matter that is nonnegotiable:

> "We're not going to change a lot as long as the pervasive attitude in society is unshaken. And how do we do that? We have to have empowerment with accountability, but we also have to be coming from the same mentality, the same working definitions of whatever it is we're talking about." P02, Survivor, Advocate.

Another key aspect of preventive work is reframing the way DV is viewed from an individual problem to the broader dimensions that contribute to it (e.g., toxic masculinity, patriarchal beliefs, past trauma), and as a result, dedicating the resources needed to educate communities about its root causes. Expert Participant One called for normalizing talking about abuse and it's not-so-visible forms, dating, consent, agency, and bodily autonomy, issues which are rarely discussed and some deemed taboo among the Muslim community:

> "In terms of general awareness, what constitutes a healthy marriage or a healthy relationship? consent, what even pleasure means in the context of relationships, what is a healthy pleasure, and why it is such a big human taboo or stigma still to talk about these things in kind of authentic and healthy ways rather than keeping hush hush, and just ignoring what are roots to that problem, to begin with." EP01, Survivor, Advocate.

The participants commonly emphasized the importance of focusing on the younger generation to shape their views around healthy models of communication, relationships, and gender views because they will be shaping future generations in return:

> "I think it needs to have educational awareness that go into topics that are directly around abuse, but also topics that are relevant to the conversation. Discussing conversations like "what do healthy relationships look like" understanding what is like toxic relationships look like, abusive relationships. I think also what is

> positive masculinity versus toxic masculinity, and what does our tradition say about these things". EP05, Community and Faith Leader.

Key to community healing structures are education and resources around healthy healing mechanisms, such as stress management and coping mechanisms.

Additionally, to encourage engagement when educating about DV, participants suggested reframing how DV is tackled, including using language and content strategically based on shared goals. For example, advocates use the healthy family's framework at community and faith-based centers as a way to counter DV and encourage people to listen by focusing on a positive outcome away from shaming and the contention of the DV topic:

> "We used to have training where we never called the domestic violence 101, we called it healthy families, and then people would come because everyone wants a healthy family. If we called it domestic violence 101, no one's going to come. So there's a little bit of like marketing involved in there too because we want people to attend. It's not just about having the event. You need people there to actually receive the message." FG4_P06

Explicitly lecturing against DV may cause pushback, defying the purpose of reaching the intended audience and possibly creating further harm (*e.g.,* abusers intentionally isolating victims from attending community gatherings).

Lastly, preventive work is done on an institutional level (*e.g.,* at schools) by proactively supporting couples, parents, and family members through education and counseling. Expert Participant Three, a senior social worker and marriage expert, suggested premarital counseling, parenting, and coping mechanisms courses for younger and mature adults:

> "We really do want to do a better job of helping people get help before it gets to that point [involving law enforcement]. And that's one of the reasons why I do the

> work that I do in terms of premarital education, doing my best to help singles and newlyweds get pre-marital or early marital education, and to learn about domestic violence and how to prevent it, and how to have a happy, healthy relationship and a peaceful marital life." EP03, Social Worker and Marriage Counselor.

Indeed, several participants echoed the lack of expertise and awareness around power and control dynamics underlying abusive behavior, and in return, the need for the average individual to identify DV signs and patterns to help minimize cases of abuse:

> "The community has to be able to spot these signs. This is really sad but maybe having somebody who's trained in these situations, like a social worker? I know I see in bathrooms in airports or national parks, 'Are you being trafficked? Here's a number to call', I think just [creating] regular opportunities to interface with somebody who will be more sympathetic" P08, Survivor.

Though much preventive work requires on-the-ground specialized efforts, technology can facilitate and support such efforts on larger scales (Rabaan and Dombrowski 2023). The participants envisioned different ways to encourage awareness through advertisements:

> "When I say advertisement, it's very animated and colorful, it's not depressing, it's not 'Oh my God! This is a battered woman!' It's still easy on the eyes, but it's a message out there with a number, with some information. You're creating the awareness, but you're still providing the information, and you are getting the message out there but still giving the choice to the victim of making that call. If they feel like it, if they relate to whatever information that's being provided out there." P16, Survivor, Service Provider.

Two elements stand out in the described idea: the need for gentle, engaging content and prompting action without pressure. Participant 16 further detailed her design idea to integrate DV-related knowledge into a presented storyline:

> "You can even show the cycle of abuse through those comic things or whatever it is, because it's almost enticing in a way that what's next? So it's easy on the eyes. It's not traumatizing to watch, yet it's like, 'hmm, I'm curious what happened to this person next?' Because it's almost like you're creating that storyline, but with that storyline, you are still providing information and awareness, and resources out there." P16, Survivor, Service Provider.

Participants considered different platforms for different audiences. For example, television ads for victim-survivors who may not have access to smartphones or social media, and reels and short videos for younger audiences and social media users.

To work toward healthier perceptions of relationships and, as a result, de-normalize and demoralize abusive behaviors on a community level, DV needs to be addressed as a multi-layered issue from a social, psychological, spiritual, and systemic standpoint.

6.3.2. Breaking Intergenerational Violence and Trauma

While prevention work aims to catch the action before it occurs, breaking intergenerational violence happens by reflecting on what individuals and communities have gone through that may have contributed to ill practices in handling DV and implementing ways to disrupt and reshape habits and beliefs. SCTJ aims to change social norms contributing to social issues; in this context, social norms can be changed to serve victim-survivors by understanding historical community trauma, how such trauma contributes to current practices (*e.g.,* denying DV's prevalence), and unlearning harmful socialized value.

Breaking intergenerational cycles of violence, where families and communities may be complicit in enabling abuse, starts by addressing the roots of generational trauma (Protocol, 2014). Generational and community trauma is inflicted by systems of oppression, discriminatory policies, historical events, and beliefs (API_GBV, n.d.; Protocol, 2014). Participant Ten, who has worked extensively in restorative and transformative practices, highlights:

> "In communal-based justice approaches, I think that where we always start from is knowing the history. Everybody involved has to know the history, the statistics,

> what has happened in this country, in this world, in this community" P10, Survivor, Founder, Executive Director.

The power of acknowledging the effects and consequences of traumatic factors lies in knowing that by treating the consequences, communities can create space for healing. Expert Participant Five spoke extensively about the role of identity in oppressive systems and the need to acknowledge its impact on the Muslim experience:

> "Because domestic violence is also a systemic issue, and we want to think about that in terms of how supremacy functions and where does privilege really come from. And so, when we're looking at the experience of who checks off the boxes of privilege when we're dealing with systemic and structural oppression, you can see that many in the Muslim community…don't fit those boxes of privilege… this is going to impact both indigenous as well as immigrant populations because the systems that are in place are already built for other than you. And to now be able to recognize, 'well how do I educate myself? maneuver in those systems? how do I ensure that basic needs are being met?'" EP05, Community Leader.

Understanding the power of privilege was echoed by participants as a way to show how social and structural systems are benefiting or hindering individuals and communities and how that impacts domestic violence experiences. In return, such understanding helps in finding suitable and nuanced healing resources.

Harmful socialized values must be unlearned, and patriarchal practices must be dismantled to improve community support and behaviors toward DV. Several participants highlighted that for Muslim communities to heal, they need to engage with spiritual knowledge around abuse intolerance and social responsibility to strengthen the overall understanding and sense of taking pragmatic action in countering DV, on a community and institutional level. Participant Eight describes the need for dialogue and establishing community understanding:

> "...a community understanding of saying this [abuse] is not right! You can't do that to your spouse, this is not a loving Islamic way of being, and this is not fitting our Quranic model of compassion." P08, Survivor.

Community leaders' authority plays a significant role in influencing communities' understanding of social responsibility by using their platforms to take firm stances against abuse and guiding community members' roles in breaking abusive cycles. Expert Participant Five, an Islamic scholar, emphasized the myriad Islamic sources that condone abuse and injustice, and here talks about Islamic concepts that serve to encourage social action to counter abuse, which Muslims need to be aware of:

> "Social services meeting the needs of the underserved and underprivileged, would fall under communal responsibility [Fard Kifaya]…part of that is recognizing that at least in the United States now there are numerous mosques, I'm not saying is a bad thing, it's a great thing, but now there also needs to be development on what was established from before and people build out clinics and pantries and advocacy groups and whatever else that is not there that really caters to the nuance." EP05, Faith Leader.

In my prior work (Rabaan, Young et al. 2021) and the proposed designed prototypes, I advocate for and design an interactive interface that centralizes gender-balanced spiritual knowledge for users to ask for and retrieve Islamic knowledge based on their specific situations. The promising emergence of generative AI technologies, though in its early stages and require careful ethical consideration, makes such an implication feasible.

6.3.3. Structural and Systemic Reform

To adjust communities into autonomy-supportive and healing environments for people who have undergone harm, change needs to be reflected in institutions' and governments' laws, policies, and legislation. Structural and systemic reform occurs by improving current structures that enable exploitation through outreach and engagement work, research, and lobbying.

Institutional structures are formal and informal rules established through policies, hierarchies, and norms that shape organizations (structures, 2019). In the context of DV

dynamics in the Muslim community, mosque structures influence survivors' journeys when seeking help. Most mosque structures consist of one board of committee members who govern the mosque's operations (Bagby, 2021). Board members are predominantly male and respected by the community for their religious competency, affluence, language skills, or heritage (*e.g.,* proficient readers of the Quran can be highly ranked socially). Such structures result in power imbalances that cause frustration and serious consequences, especially in DV cases where abusers are prominent figures in the community (*e.g.,* board members). As a result, the abuser's community support is untethered by their actions. In a case P22 handled, she exemplified the moral dichotomy toward those in positions of power, as follows:

> "We have a client who is literally a victim of trafficking, and it was one of our very high-risk, very, very serious cases, and her husband was part of this huge masjid community, who was either on administration or on a board, and he was very connected, very popular, very well-known, very respected, but he's doing this [abuse] behind closed doors. So, you can beat your wife the night before, and you come in the next day and meet the president of a masjid! How is that happening? How is that okay? What can [and] how can we not let these people be in these positions?" P22, Service Provider.

To account for structural power differentials, participants suggested comprehensive background checks before individuals join mosque committees, along with strict mosque abuse intolerance policies, followed by severe repercussions for those who violate such guidelines (*e.g.,* losing their board membership.)

Another form of harm found in DV-related structures is the absence of mechanisms to monitor and regulate entities that offer services to survivors (*e.g.,* property owners), leading to survivors' exploitation. For example, EP07 revealed common corruption issues survivors could face after leaving their abuser:

> "The word that you commonly hear will be 'slumlords' because they're the ones that know where the free money is coming in, and they will just ask you [organizations]. They will take them [survivors], but then those apartments are roach-infested, they are just not livable. The clients would come out of there screaming! So it's this never-ending hands to a wheel that you never want to come out of." EP07, Service Provider.

The reality of feeling trapped for survivors is common and requires structural reform where services are monitored, and survivors are included in the service selection and evaluation process to ensure the safety and suitability of services.

To reform existing structures, participants highlighted the need for leading roles to be reshaped to ensure survivors are protected and served fairly. Community members are approached and held accountable by stakeholders within the DV ecosystem. For example, the mosque liaison plays a significant role, especially for females in the mosque community (Rabaan and Dombrowski 2023). When it comes to the liaisons' part when handling survivors, P15 adds:

> "[an] ideal scenario with every Masjid population [is] if there was a liaison who was trained on who the advocates are, on what the processes are, how to best serve the survivors. If that was replicated across communities, then I think we would have a better chance of reaching out to survivors and supporting them in the way they need to be." P15, Survivor, Service Provider.

Participants echoed the necessity for female liaisons to understand the needs of survivors, identify any discrepancies in the imam's perspective and capacity to serve those needs, and acquire sufficient information on related local services and tactics to account for any shortfalls in addressing the abuse. Further, advocates have expanded their outreach to reshape community members' roles in serving survivors. For example, part of P05's work is to prepare prominent women in the community to handle survivors, especially when leaders and authority figures are not well-equipped to resolve DV issues:

> "We have what's called 'Women's Action Network', which is a group of women who are in leadership roles in the mosques in our area. And so we are having

> trainings with them on spiritual abuse, domestic violence, things of that nature, so that they can take them back into their mosques, into their spiritual communities, and to be able to help the women in those communities effectively." P05, Advocate.

Building grassroots networks was a response to the challenge of reaching and developing relationships with imams and engaging them in abuse prevention training. More broadly, participants stressed the mosque's significant role in the community and called for its upgrade to serve communities practically, where people can find pro-bono mental health and legal professionals, housing opportunities, childcare, self-sustaining jobs, and training to uplift individuals during their most vulnerable moments.

Another way to support survivors on a community level is by shifting the role of public services that are not directly related to DV services. For example, P23, a survivor, was reassured by an immigration officer before entering the US that she has the right to protection services if she ever encounters harm. Additionally, P23's sister would meet and consult with a lawyer and social worker through a public library, allowing her to verify and debunk threats from her abusive partner. Changing the responsibilities and roles of various stakeholders can greatly contribute to creating structures that promote healing in communities.

To induce broader change in countering domestic violence, participants suggested socio-political interventions where funding is prioritized, and supportive laws are in place to ensure adequate and nationally standardized services. For example, P10 emphasized the importance of having abundant facilities staffed by competent service providers:

> *"*We need shelters in every state across the country, but definitely [in] every major metropolitan city. Every single one of them has to have a multimillion-dollar endowment for therapeutic, legal, and immigration support for victims of domestic violence. Every center has to have a minimum of two dozen people who are trained and certified in domestic violence constructs, whether that is a trained

> nurse, therapists who are trained in trauma and sexual violence and domestic violence, in addition to the other things, attorneys, immigration, divorce, et cetera, civil litigation attorneys, you name it, social workers for housing, food, basic necessities. So all of that has to happen in every major metropolitan city, and it needs to be standardized with a multi-lingual capacity, and they all need to be in connection with one another." P10, Survivor, Founder, Executive Director.

Participants also suggested annual meetups for organizations with religious and social institutions with social services and connecting DV coalitions and chapters with cultural-based DV organizations and imams as effective mechanisms to bring the different stakeholders together and strengthen their collaborations. A key aspect of providing continuous competent care within community healing structures is connecting competent organizations and services and facilitating seamless interaction across the various stakeholders involved (Rabaan and Dombrowski 2023).

Community transformation requires informing and reforming institutions and policies. One way to do so is through context-based research. Participant Ten finds current data available to be lacking in quality and quantity:

> "The research is so skimpy, and we're talking about these issues, but we're literally relying on statistics of secular or non-Muslim religious-based research, and that's scarce! So these conversations are not even built upon collected data, it's built upon our gut experiences, our lived experiences, our assumptions, our theories, based on the patterns that we've seen… there's so little data out there to even base our conversations on. So in terms of resources, we don't have enough knowledge about the issue, how big it is, the extremities of it, the central core of it." P10, Survivor, Advocate, Founder and Executive Director.

Along with deficient research, political representation and integration of survivors surfaced as a critical area that is often overlooked systemically. Participant Four, a diplomat and FGM survivor, frustratingly called for political reform through integration:

> "We need to start integrating survivors meaningfully into policy to shape it. If we're going to have programs, et cetera, they [survivors] need to actually be seen

> as intellectuals of humans with brain power and expertise and skills that should be informing the actual work, versus being seen as peripheral puppets." P04, Survivor, Advocate, Diplomat.

Lacking political representation reproduces systemic inequalities, especially for women of color, as their needs and goals are often excluded by both the feminist and antiracist movements (Durfee, 2021). Actively involving healed survivors, who are experts on the topic, on social (*e.g.,* working with other survivors), structural (*e.g.,* supporting law enforcement and court members), and policy (*e.g.,* policymaking and reform) levels, is essential to uphold survivors' dignity, reduce hostility, and address the underlying causes of abuse.

6.4. Conclusion

This study contributes the following: I empirically highlighted SCTJ social mechanisms (*i.e.,* survivor advocacy, community accountability, and community transformation) that form healing structures for DV victim-survivors. I constructed design concepts derived from those social mechanisms' key underlying values and evaluated the proposed design concepts with multiple DV experts of distinct backgrounds. This work provides design insights around the possibilities and limitations of technology in supporting healing structures. A summary of the design concepts, their features, and how each corresponds to SCTJ principles, mechanisms, and underlying values is found below in Table 5.

Table 5: Design Concepts Evaluation.

Design Concept	Feature/Function	Underlying Value and SCTJ Principle
Website (Appendix	Soft colors	Trauma informed-design – to reduce negative emotions.

B (1))	Multi-lingual	Empowerment
	Exit button	Safety – once the clicks the (X) button, the page is left and a Google search page appears.
	Quranic verse condemning violence	Religious piety
	Motherly figure	Support – resembling older wise women in the community.
	Multiple input modes (text, voice, and clicks)	Safety – to account for different scenarios (*e.g.,* times of distress when typing is difficult, or abuser is nearby.)
	Chat agent	Empowerment and dignity – by meeting the user where they are and customizing the information and resources according to their needs. Patience – by providing incremental information and gently nudging for the next step. Informed decision-making – by addressing legal and service implications of each possible decision with simple language and visually charts.
	DV definition page	Empowerment and religious piety – by providing spiritual-based definition and content.
	Resources page	Trauma informed-design and safety – by only listing vetted, responsive, and culturally competent resources. Harm repair and resiliency – by listing resources that support the victim-survivor's healing process and skill building.
	Group Support page	Support and empowerment – by having an avatar-based support group option, to support a more intimate experience.
	Spiritual Guidance page	Empowerment, religious piety, and support – by providing gender-balanced information from an Islamic perspective to support and empower the user in understanding recognizing abusive

		behavior and building the language to deal with enables or abuse. Safety – by providing space to ask questions without the need to be identified. Structural reform – by decentralizing religious guidance from imams and patriarchal Islamic scholarship.
Mobile Application (Appendix B (2))	Recording abuse incidents	Empowerment – by having proof of the abuse.
	Multiple input modes (text, audio, video, images)	Safety – for detailed documentation and accounting for different scenarios (*e.g.,* times of distress when typing is difficult, or abuser is nearby.)
	Sharing parts of or full story with vetted resources	Care continuity and trauma-informed design – to avoid retraumatization by reducing the need to repeat one's story to every stakeholder involved. Abuser accountability – where advocates and allies can use the story to support their intervention and prove abuse in legal and social settings.
	Saving files	Empowerment – by saving copies of legal documents in a secure space (*e.g.,* when leaving the abuse is an option they'd pursue.)
	Finding resources	Empowerment – survivors can find support, knowledge, guidance, support, and allies.
Storyboard (Appendix B (3))	Safety List	Empowerment and informed decision-making – by identifying any red flags prior to a potential marriage (especially in cases of community outsiders or newcomers "e.g., converts") Abuser accountability – through reporting abusive behavior. through reporting, abusers might reconsider their actions if they had to lose face in society, lose future marriage opportunities or cost them financially.

In the next and final chapter, I elaborate on how survivor-centered transformative justice can be further explored in HCI practice and design.

Chapter Seven: Design Implications

Designing for Healing Structures: How to Preserve Users' Dignity in HCI Practice

This section corresponds to the overarching research question, "How can we incorporate transformative justice attributes into design approaches rooted in the sociocultural, historical, and political context of US-based Muslim domestic violence survivors?." To uphold the principles of equity and doing no harm, I am responsible for articulating what I see as potentially harmful in our scientific endeavor. I first start with a theoretical reflection situating SCTJ among other approaches, and later drawing from SCTJ principles, I provide reflections and discuss improving our research ethic, methodologies, and design implications to avoid reproducing harm through our practice.

7.1. Theoretical Reflection

In chapter two, I compared restorative and transformative justice as alternative approaches to the criminal legal system from a theoretical standpoint and when applied to the US-based domestic violence context. I draw conclusions based on academic literature and activists' theories, work, and perspectives. Within the social justice activists spaces, disagreements remain as to whether transformative justice warrants abolishing the criminal legal system and what abolishment entails (Imarisha, Gumbs, Piepzna-Samarasinha, & brown, 2017; Mimi E Kim, 2021; B. J. Murray, Copeland, & Dettlaff, 2023). Within the TJ community, activists and scholars contend with whether systems can be reformed by working within existing structures or abolishing the existing systems and creating counter-structures away from harmful systems is the route to justice (Mimi E Kim, 2021). Further, tensions arise when applying activist theories such as restorative

and transformative justice to the complicated social context of domestic violence (B. J. Murray et al., 2023); communities can act as enablers of abuse and supporters of victims-survivors, faith leaders can help in the mediation process and healing from abuse and revictimize survivors, and systems provide laws and resources that protect harmed and vulnerable individuals while inflicting harm on marginalized communities. Additionally, applying justice theories created and tested in a Western context, may look different in an non-Western context (Islam et al., 2018). Striking a balance between supporting the parties involved in DV dynamics while protecting victim-survivors is strenuous; however, these are justice-making processes (Coker, 2002), by gradually improving the multi-layered approach of centering survivors' autonomy and decision-making in their help-seeking and healing processes while encouraging accountability and transforming communities. I followed the TJ in GBV approach suggested by scholars and advocates (API_GBV, n.d.; Interventions, 2012; Mimi E. Kim, 2011; Mimi E Kim, 2021) and inferred from the empirical findings and cultural-based advocacy approaches followed by the participants of this study. Based on the tenets of both RJ and TJ, that support constructive community practices, protect against systemic and social harm, support community accountability, and transform community and systemic conditions into survivor autonomy-supportive environments, where individuals facing abuse are comfortable coming forward without the fear of being disbelieved, shamed, or revictimized by society or mainstream service providers (Imarisha et al., 2017). What matters is for advocates and policymakers to remain critical of systemic harm and avoid "being the state" (Mimi E Kim, 2021), with survivors' autonomy and needs constantly informing their related efforts and policies (Coker, 2002).

Existing structures in the DV context include the legal system, mainstream services, faith community, and social media. Throughout this dissertation, I established that the criminal justice system, mainstream service provision, faith figures and institutions, can cause harm rather than support. However, they still play essential roles in help-seeking, survivorship, and healing. Thus, my stance is that these existing structures cannot be abolished entirely (when considering the abolitionist view of transformative justice), nor can the legal system be replaced in its entirety with existing community practices (as is the focus of restorative justice). For example, from my interviews and the literature, some survivors did find supportive imams who stood as mediators between the survivor and police, supported them in taking action, and used their privilege and power to deter the abuser from inflicting immediate harm. Spiritual guidance was also an important aspect of their help-seeking process, which survivors found in reaching out to faith institutions, religious texts, and spiritual-based therapy. Many of the survivor participants and clients of service provider participants had the legal system involved, whether voluntarily or involuntarily (through mandatory reporting). Several received services that helped in stopping or minimizing the consequences of abuse (*e.g.,* financial or housing needs) and at times regretted not invoking the system earlier (*e.g.,* to issue a restraining order), especially after multiple attempts to deter abusive behaviors through community mediation strategies. Also, advocates utilized the criminal legal system as a deterrent strategy, without explicitly invoking it, by pressuring community leaders and abusers to abide by the survivors' stipulations to avoid further legal ramifications. Efforts have been established to minimize harm within the criminal legal system by building collaborations among law enforcement (Mimi E Kim, 2021), though requiring broader

implementation and further evaluation, they are steps intended toward more just measures and part of the ongoing process toward centering and protecting survivors. I conclude that in our current times, harm cannot be completely avoided, structures will exist, whether formally or informally (Freeman, 1972), and bureaucracies will cause harm. However, with the criminal legal system existing the longest and being the most developed in comparison to less developed transformative justice counter-structures in the domestic violence space, currently, it is a privilege rather than a need to abolish existing systems altogether, especially in the complicated setting of systemic and historical discrimination, and survivorship and its vulnerability (*i.e.,* the necessity of psychological, legal, physical, and financial systems and services.) Thus, striving towards advancing structures and capitalizing on their strengths while being critical of existing harms, protecting against them, and reforming conditions to eradicate harm resulting from current systems, is where I find the middle ground between RJ and TJ in the domestic violence context. Furthermore, I argue that the most significant harm that may occur among all the options available is to devoid survivors of their autonomy in choosing what they perceive is the safest option and that aligns with their needs and values at the time they seek help. Hence, to avoid co-opting the term transformative justice and honor the work of its founders, I chose the title (Survivor-Centered Transformative Justice), which aligns with TJ in addressing the root causes of abuse, however, centers survivors by establishing healing structures, which expand the options available, including community resources and practices and mainstream services, prioritize equity, deliver comprehensive services to safeguard human safety and dignity, and employ effective non-punitive approaches to addressing harm. A healing structure preserves the dignity of its people, especially the

ones harmed the most (*i.e.,* victim-survivors), and consists of multiple interwoven components to protect against harm.

By applying an SCTJ lens to this dissertation, I see the culmination of theories and approaches, inferred from gender-based violence advocacy, social work, and feminism, provides a protective structure against reproducing harm in design. Islamic feminism redefines the meaning of agency and resistance within domestic abuse and a spiritual context to account for practices that, otherwise, would have been omitted using mainstream feminist theory (*e.g.,* patience and spiritual agency). Restorative justice conveys a scope of intervention that includes community practices and accounts for victim-survivors' needs outside the criminal justice system. Trauma-informed care shapes the immediate interactions with people who have experienced harm. Transformative justice gives us the language to describe harm as it exists and breeds in social and systemic conditions harming both the person harmed and the one who has done harm. Both restorative and transformative justice provide mechanisms to deal with harm in different capacities. Each theoretical standpoint informs a scope of intervention and complements the one thereafter; For example, Islamic feminism gives a holistic depiction of the survivor's needs while informing harm repair mechanism (*e.g.,* mediation, retribution) from an Islamic lens. Restorative justice informs transformative justice by scaffolding community practices to repair relational harm. Transformative justice broadens intervention to account for root causes of harm. Lastly, the SCTJ framework encompasses all the above and stresses the need to improve harmful practices and systems and build healthy alternative structures. Figure 3 shows a summary visualization of this dissertation's theoretical contribution.

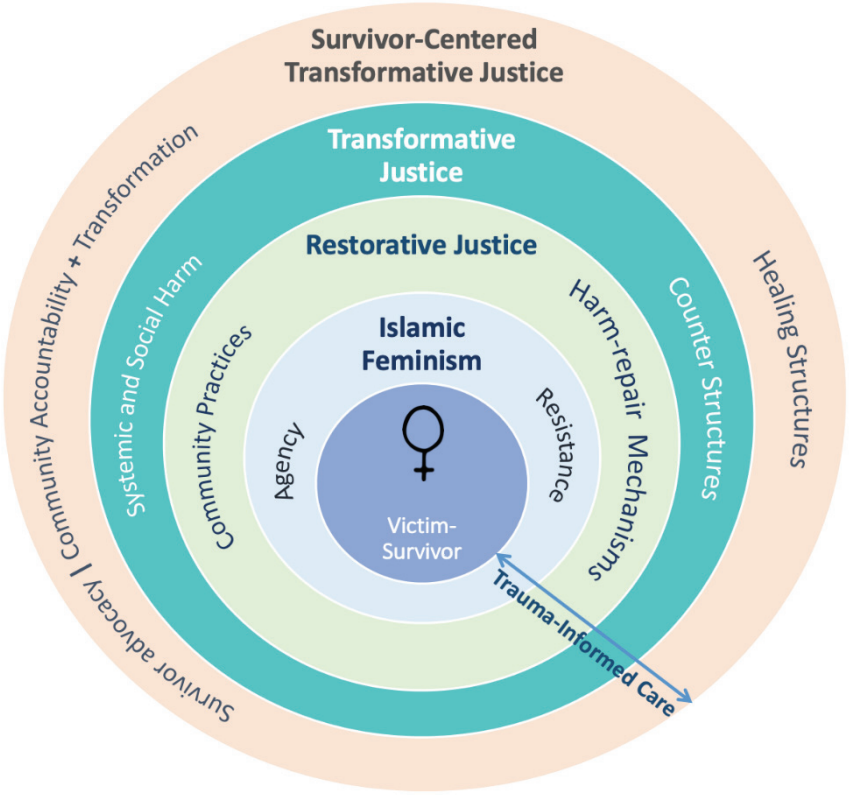


Figure 3: Theoretical Contribution Summary.

7.2. Preserving Users' Dignity in HCI's Research Ethic

Justice-oriented work with marginalized communities requires humility, taking the time to develop the understanding, sensibilities, and knowledge necessary to fully grasp the issue, the historical, social, and systemic conditions, and what different facets of justice look like as defined by users and their communities (Asad, 2019). In our work as HCI researchers, we are working closely with communities who may have been previously harmed by people, institutions, and systems. Thus, we must be diligent not to reproduce such harm through our practices; by being wary of savior complexes, accepting and respecting the different choices people make while understanding why they make them (*e.g.,* accepting different ideas of justice), their histories, and perspectives

(Abu-Lughod, 2002; Bilge, 2010; Gautam et al., 2019; Mahmood, 2006; Wadud, 2013). Also, by being vigilant about staying clear of serving political rather than humanitarian purposes when choosing selective concerns, which sometimes depend on a sense of Western superiority (Abu-Lughod, 2002; Malak, 2019). Non-Western contexts expand HCI literature to recognize and stand against cultural relativism (*i.e.,* deeming complexities as cultural and thus do not require intervention) (Abu-Lughod, 2002; Mahmood, 2006; McDonald, 2008), dismissive universality (*e.g.,* Saudi Arabian women are subdued by some laws but are better than others in maternity leave) (Malak, 2019), and cultural reductionism (*e.g.,* Muslim women are oppressed because of their uncivilized social and religious rules, whereas the West is civilized and discrimination against women is not systematic but instead interpersonal and racial) (Malak, 2019).

To demonstrate through example, the process to understand the severity and amplitude of domestic violence within a marginalized community required: 1) Deeply diving into several disciplines and various sources of literature including and not limited to law, psychology, anthropology, sociology, social work, and HCI studies; 2) Using several theoretical lenses: Islamic feminism (which allowed me to view agency practices I would not have considered had I used a mainstream feminist lens), intersectional feminism, trauma-informed care, and transformative and restorative justice; 3) Attending numerous webinars and reading publications by cultural-based organizations that have worked extensively with Muslim DV survivors, communities, and leaders; And lastly, 4) leveraging my own language and cultural background to gain access and understand the nuances through language and cultural connotations, that otherwise may have been hard to decode or grasp, while remaining distant enough and trained to view matters

objectively. In terms of humility, coming into this work, I was relatively prepared to be exposed to painful circumstances. However, the difficulty and intricacy of abuse were substantiated through interacting with participants and their stories. There are tangible obstacles and consequences to abuse, however, we can unintentionally perceive victims as passive or perhaps gullible when we do not consider the severity of the intangible barriers, such as the byproducts of extreme manipulation, trauma, and harm. In our sample, several advocates shared the experience of going through DV training or working at a DV agency during the same time they were going through abuse themselves, which was vital for them to start their help and healing journeys, however, advocating for others while going through it themselves exacerbated the shame they felt.

In our HCI research ethics, the minimum we need to do is follow the work and guidelines of scholars and activists who are doing the work and identify as members of the communities harmed and listen and alleviate the people's voices, and continuously work on ways to authentically acknowledge and integrate participants as co-collaborators and informers of our work.

7.3. Preserving Users' Dignity in HCI Methods

Here I express ways to prepare students and researchers to tackle social problems in HCI. To start, though I tried to prepare for this work by avidly reading prior research, attending DV-related seminars, and signing up for relevant mailing lists, I did not consider ways to digest or directly deal with individuals who have undergone extreme harm. I would have benefited from trauma-informed training on receiving and handling certain triggers for participants and myself. Such training can be recommended by the institutional IRB committee or as part of methods courses. Relatedly, project-

management courses or training as part of methods classes would be useful in efficiently managing projects, storing, sorting, and parsing the massive amount of data, codes, and themes.

During this work, there was a persistent fear and concern about whether my role as a design researcher was meaningful for my participants and the topic more generally. For example, while formulating and executing the participatory activities, I was contending with the massive scale of the problem compared to the technical possibilities both the participants and researchers were trying to envision. However, throughout the data collection phases, I received voluntary reassurance from participants, with personal and professional experience in the field, affirming this research is significant and needed because such multi-legged problems can benefit from varying perspectives and angles. One expert participant, a scholar of Islamic studies who has been working on the very issue of domestic violence in US-based Muslim communities for over a decade, found the conversation we had when evaluating technologies related to advocacy and accountability as "profoundly useful" and stated that she "never put all the technology pieces together until this conversation." Participants thanked me for creating a safe space to speak about the myriad of issues faced and learn from and connect with others, which was primarily unintentional but comforting, nonetheless. To account for researcher's doubt and learn to balance humbling ourselves without trivializing the problem at hand, on a conceptual level, researchers need to: 1) acknowledge the massive reiterative efforts and expertise needed to work with intersectional experiences, 2) collaboratively translate what is feasible into design while taking into account the potential damage of inadequate design, and 3) admit and commit to the realization that we cannot tackle such massive social

problems, but rather appreciate the small steps we are paving within the cumulative evolving process of social justice. To incorporate constructive doubt on a practical level, where we find a balance in being cautious not to harm the cause nor the participants involved while also remaining confident in the role design research can play in social problems, we can start building reassurance checkpoints to check in with participants about whether we are doing this work properly or adding value to the conversation. Also, we can view qualitative data collection methods such as focus groups not only as a data collection method but as a potential constructive space for participants to safely express their concerns, share their experiences, and learn and be a resource for others with similar experiences. One way to do so is during the recruitment phase by leveraging the vetting or screening process to ask for experiences, preferences (*e.g.,* group or individual conversation, with others they may know), and anticipated outcomes, and purposely assigning participants in circles based on their comfort and potential needs.

Seeing the forest for the trees: Coming into the last phase of this research, I wanted to find clear steps to advocacy, accountability, and transformation from transformative justice (TJ) experts, where I can transfer those into clean technological designs that aid in the justice process for survivors. I soon realized that few organizations claim to use a transformative justice approach to address DV in the Muslim community or any other community, which made the recruitment process frustrating. However, almost everyone I met relied on TJ's sensibilities without naming them as such, where they centered the survivors' needs, worked alongside survivors to make informed decisions and reach their goals, promoted accountability among community members, and strove to change broader aspects of the social or systemic constructs that normalize

or enable abuse. I concluded that survivor-centered transformative justice principles manifest as a protective fabric made of individuals (advocates, service providers), community leaders, and organizations, and at times, supportive policies, surrounding survivors when they are ready to take a step in a different direction, whether they decide to stay or flee. Following that perspective allowed for greater flexibility in recruitment and being receptive to broader concepts, strengthening the theoretical framework and empirical findings.

Lastly, in social-justice conscious research, we are often faced with massive amounts of important data, and it is the researcher's call to decide what narrative is most important to highlight. The researcher faces a prioritization quandary; what is important when everything is important? This resulted in a type of guilt stemming from wanting to cherish everyone's hard work, lessons learned, concerns, and wishes for a non-violent future. One way to help resolve this prioritization quandary is by identifying the underlying values of participants' practices and design suggestions and cross-referencing those values across user groups. As a result, gaining a broader perspective on what is more important in a specific instance of time and within the researcher's capacity. By translating values into design concepts tied to the research questions initially formulated, one spares the urge to cover every case scenario, which can fog our vision of what matters throughout the process.

7.4. Preserving Users' Dignity in Design Implications

I embarked on this journey wanting to understand domestic violence within a "non-western" context, through which I realized DV is not incident-based. Rather, DV is

a social, health, ideological, systemic, and political issue that requires much more than reporting abuse and getting immediate help when needed (a glimpse at DV-related mobile applications would tell you the opposite.) Today, I see the value of positioning DV under the broader umbrella of gender-based violence (GBV) rather than an individual act of violence; when we view it as an individual act of poor ethics, we dismiss its enabling factors and systems of oppression perpetuating abuse. We overlook or deny the need to go broader than the victim's interaction with the outside world. Finally, as our expert participant (EP02) explains: "The lens used to view DV as GBV is critical because it dictates alliances, whom to work with, who not engage with." To transport the SCTJ approach in addressing GBV to design, throughout our findings I focused on systemic and social conditions perpetuating abuse, disregarding the fact that technology design can be among the enabling factors of abuse. Big Tech corporations' profit-driven and fail-fast models play a role in reproducing harm for victim-survivors. For example, an issue that continued to arise in our data is the dominance of patriarchal Islamic scholarship online, which victim-survivors encountered when using search engines to look for spiritual-based information to understand their options, rights, and responsibilities in response to abusive situations from a spiritual viewpoint. Politicized forms of religion are funded by state actors (Hibbard, 2010), which given search engines' ad-based model extends to what information the average user consumes through search queries. Another example of technology design that may disserve victim-survivors is social media platforms that do not offer to guard security measures against potential perpetrators exploiting their partners or family members' accounts (*e.g.,* using biometric recognition). In this section, I build on HCI work by proposing ways to minimize harm through design within the

GBV context by focusing on designing for users' values, harm reduction, accountability, and systemic change.

7.4.1. Designing for Cherished Values

Design thinking is not always appropriate for tackling deep-rooted problems. By designing around cherished, internalized, and socially familiar values, I call for empowerment from within the participants' structures when evaluating current technologies or providing implications for future inclusive designs. The goal is to include norms beyond social impositions and highlight the situation's complexity by encouraging designers to focus on the cultural dimensions of the problem, consider historical developments, and accept and respect the different choices people make while understanding why they make them. In this work, I turned to uncovering our users' values at various stages. (*i.e.,* when examining sociotechnical agency practices (Rabaan et al., 2021) and when designing interventions (as seen in Section 3.3.3.)

To design for cherished values, I provide design implications around key values embedded throughout the data, including religious piety, social cohesion and agency, and patience and resiliency. Designing for cherished values is informed by Islamic feminism, empowering women from within societal structures while accounting for their agency (Alsheikh et al., 2011; Gautam et al., 2019; Sultana et al., 2018), and the sensibilities of social justice-oriented design (Lynn Dombrowski et al., 2016). Together, these three foci allowed me to recognize and focus on cultural practices and systematic limitations imposed on women and how they perpetuate domestic abuse and enable people to develop their capacity and help each other tackle domestic violence in the Muslim context.

- ***Designing for Religious Piety:*** Religion took a significant role in the participants' lives, where it acted as a double-edged sword; helping build resiliency and push towards social participation and autonomy in their relationships, while also being used by abusers to abuse and enforce rules and regulations on women in the name of religion (*e.g.,* the husbands demanding more children), undermining women's needs and manipulating their choices. In this section, I develop design implications around the value of religious piety to reach the user and beyond (Sultana et al., 2018). Religious piety is acting according to God-righteousness (Sohani, 2017). In our context, women strove towards this virtue in interactions and decisions according to their religious judgment. Designing for invoking religious piety may likely be more familiar for Muslim women and men and may avoid suspicions of aid often tied to colonizing foreign, Western influences.

In the realm of technology, developers have recently attempted to tackle domestic violence through websites and safety mobile applications (Sunny Sinha, 2020). Though they provide helpful features such as educational content and contact alerts, they are yet to be proven effective and are unfit in the Muslim context; because Western-based informative content often disconnects from the religious and cultural beliefs of Muslim communities, and religious piety is often overlooked as relevant to encouraging safety. To overcome this gap, I recommend building on existing DV websites and applications through collaboration with organizations specialized in Islamic feminist reinterpretations (*e.g.,* PUAN (Muttaqin, 2015)), to produce accessible visual, audible, and textual content focused on explaining the rights and responsibilities within an Islamic lens promoting gender-equality. An example would be providing topic sections related to gender parity

in rights and duties within Islamic marriage (*e.g.,* under Islamic law a man has no control over his wife's assets and property without her will). By disseminating the gender-balanced work produced by Islamic feminist scholars (such as Amina Wadud and Ziba Mir-Hosseini alongside many others (Encyclopedia, n.d.)), we honor their immense efforts, help break social censorship, and challenge the patriarchal religious discourse prevalent in traditional media outlets, mosques, and schools (Al Fassi, 2016, 2019; Wadud, 2013).

Another way to design for religious piety is to allow instant fact-checking of religious misinterpretations and simultaneously provide alternative anti-abusive texts and analyses (*e.g.,* the diverse schools of thought on verse (3:56) focusing on non-abuse, as discussed in Section 2.2.2) Such design provides users with transparency and informs their choices in what religious information they consume that may reinforce gender-harmful norms. Similarly, the design could highlight Islamic pathways to preserving women's rights. For example, a critical aspect of Islamic marriage is the marital contract. The marriage contract clauses is a legitimate space where a woman can articulate each right she expects to preserve during the marriage (*e.g.,* continuing her education and career, forbidding polygamy). A marriage can only proceed after the prospective husband agrees to her clauses and are announced to at least two witnesses to hold the husband-to-be accountable. By designing dedicated DV tools and social media platforms to allow for secured, organized sharing of experts' best practices would enable women to anticipate consequences of conflict proactively, and as a result, minimize structural hurdles of ending abuse. For example, adding an archiving feature to social media platforms to save a timeline of best practices based on location, community rules (*e.g.,* catering to specific

tribal values), and policy changes. And allowing users to verify posts, in this case, practices on what to include in marriage contracts and highlighting gaps in previous ones that need to be addressed according to community beliefs, and anticipate future settings (*e.g.,* being allowed to drive is a clause women started stating after the ban on driving was lifted in Saudi.) The benefits of such a repository of relevant, localized, and updated information include aiding abuse recognition by victims and their allies (as seen in Section 4.2.1), allowing abusers to be self-aware of their behavior (Bellini, Forrest, Westmarland, & Smeddinck, 2020), and supporting advocates to shape public consciousness against DV. Relying on Islamic feminist interpretations aligns with the value of religious piety and builds a persuasive stance in confronting opposition. Using the familiar logic of Islamic piety rather than universal human rights allows holding dialogue around abuse on common grounds of a proper understanding of culture and religion and bringing in a model of justice separate from the commonly used liberal model (Abu-Lughod, 2002; Mahmood, 2006). In designing for religious piety, the risk of offending patriarchal rulings or different schools of thought is likely. Threatening positions of power may cause conflict and even repercussions for the people involved. However, long-term ideological influence triumphs oppression, which is why designing for such influence is critical.

- ***Designing for Social Cohesion and Agency:*** A value highly regarded in the Muslim context is social cohesion—maintaining harmony and respect within a social structure (*i.e.,* family, community, country). Where the collective unit holds individuals accountable for their actions, providing solidarity, opportunity, and support in return. Support through social cohesion can be understood in marriage decision-making. A suitor

typically proposes to a woman's family, where primarily the male family members take it as their responsibility to inspect the suitor's reputation and suitability by asking around in the community, his workplace, mosque, etc. The involvement of family members from the beginning holds them accountable to advocate for the woman if the suitor they inspected and approved proves unfit. However, social cohesion often leads to maintaining the family reputation and marital status at the expense of one's needs and concerns, which was apparent in how women approached conflict in familial and matrimonial relationships at the cost of their wellbeing. Women and their societies repeatedly normalized abusive behavior. The findings of Section 4.2.1 uncovered the work women take to unfold the situation as abusive and their mental struggle to overcome habits of upbringing that contributed to their anguish. Here, I account for women's agency while preserving the need for social cohesion in design. Designing for women's agency and maintaining social cohesion is essential to finding and expressing oneself while protecting her safety in the Muslim context.

To support social cohesion, providing a safe storytelling platform (see (Bellini, Forrest, Westmarland, Jackson, et al., 2020; Blackwell et al., 2017; Dimond et al., 2013)) where personal stories, local resources, and solutions are shared is integral to expressing one's voice away from the risks of their realities (Ahmed et al., 2014). A space for reflection and enabling women to safely discuss what may be considered by the community as private or forbidden matters (*e.g.,* marital rape) and examine alternatives to their abusive situations. Safety on public platforms can be implemented by allowing user anonymity. Indeed, participants in phase one, expressed their desire and need for governmental entities to publicly shame abusers (*e.g.,* announcing the abuser's assaults

via official media) as a form of retribution aimed to deter abuse through abusers losing face in the community, while protecting the survivors' privacy. A drawback to anonymity includes permitting the abuser invisibility and unaccountability (Ahmed et al., 2014). Dedicated virtual platforms can encourage organizing collective action in less exposed spaces as opposed to popular public social media (*e.g.,* Twitter) where risk is probable (Dimond et al., 2013; Watch, 2019). By openly and collectively addressing the issue, cognitive and emotional positions transform, ultimately, unpacking the societal taboo around domestic abuse and diminishing stigma-related fear of changing an abusive situation (Ibtasam et al., 2019). Another way to support finding one's voice is to encourage proactive preparation and planning. An example is to prompt the user to consider a list of one-to-three mahram allies (as found in Section 4.2.3) for support (or to potentially be her legal guardian of choice in the Saudi context), and provide the user with the legal means necessary. Such design may help mentally and logistically prepare for sudden circumstantial changes and encourage actively changing one's situation.

Finally, there is space to design for peer support between male allies and abusers and implement ways to hold the abusers accountable through respecting authority (*e.g.,* older family members, community leaders) (Bellini, Forrest, Westmarland, & Smeddinck, 2020). However, the scarce or harmful institutional support in holding abusers responsible may undermine the ability to implement such mechanism. Ensuring social cohesion while preserving women's agency is a sensitive mission; yet specific technology design may reduce these women's social barriers.

- ***Designing for Patience and Resiliency:*** Across participants' stories, women's acute patience in deciding how to deal with the abuse was a central value.

Women sought patience while working toward career development, during physical attacks, and dealing with social and legal bureaucracies in obtaining divorce. What may be viewed as indecisiveness or passiveness (Bilge, 2010; Mahmood, 2006), is based on careful calculations of opportunity, resources, and social and legal structures that determine when it is safe to move forward. Patience can be viewed as a choice based on religious and cultural preferences like seeking afterlife rewards or parents' respect. Though patience helped women make safer decisions, as with religious piety and social cohesion, patience can be used by society to persuade women into staying complacent and enduring abuse. Another value that was parallel to patience was resilience. With scarce structural support, resiliency was an adequate strategy for women to sustain moving forward. Women developed ways to build their resilience in dealing with the abuse, including building their self-esteem, skills, and finances. Resiliency pulled women through continuous abuse and motivated them to take action to end the violence.

Designing for patience and resiliency can take several approaches. One way is to start with a screening tool to measure where the woman's at in her options, resources, needs, concerns, and what she perceives as expected or abusive. Such an instrument is a step to building a customized interactive system where resources and services are offered based on the user's needs (which I designed and tested in Chapter Six). The purpose of customization is to provide users with choices without persuading them to follow one approach. For example, if a woman is seeking moral support and cannot drive or leave her home, the system would provide relevant resources such as virtual support groups. Designing for resiliency can be facilitated by providing religious content, self-improvement, legal knowledge, reliable services (*e.g.,* therapists, local groups). Lastly, I

see value in integrating micro-financial services in DV-related technologies and social networking platforms to save or invest money away from the abuser's reach. To assist in times of reevaluating options, I encourage the design of patient technologies, where systems prompt the user over long periods to check on the user's mental and physical state and follow up with information to slightly expand the user's understanding and encourage intolerance of abuse.

Design and intervention are closely associated; however, as HCI researchers, we must be attentive to savior complexes and unintentionally serving political agendas. In designing for values underlying existing agency practices in countering domestic abuse, we strive to nudge social norms through commonly revered values that align with our population's needs, and empower women from within their societal structures by building on existing relational and environmental infrastructures. Further, values serve as ways to understand our users' motivations behind their technological preferences, usage habits, and concerns, and allow critical evaluations of existing designs and paying attention to when designs can be harmful or helpful. Such revelations are crucial in preserving users' dignity and doing no harm. Thus, I stress the importance of considering our users' familiar and appreciated values in every stage of the research process (*i.e.,* problem formulation, analysis, implications and design, and evaluation.)

7.4.2. Designing for Harm Reduction

Harm reduction within DV is a non-linear, self-identified, and internally motivated process unique to the victims-survivor to help "reduce, avoid or escape violence and to minimize its effects" (Douglas, 2011) and involves developing strategies that attend to "individuals' and communities' goals, needs, strengths, and deficits"

(Cross, 2019). By considering harm reduction as a guiding principle, despite designers or other stakeholders having conflicting views with the decisions made by victim-survivors, we meet our users at their current stage in the process of change and design alongside them. Tensions may arise in balancing how we, as researchers and designers, become sensitive to the needs and decisions of our users while considering the consequences of trauma and abuse such as the emotional and physical deleterious effects of DV, dissociation, and decision-making paralysis, as reported by participants and scholars (Van der Kolk, 2022). In other words, in situations where one's agency is constantly dispossessed, making critical life decisions can be overwhelming, burdensome, and result in serious harm (*e.g.,* staying and tolerating the abuse). However, when professionals make decisions for victim-survivors and not alongside them, such professionals are replicating oppression and causing further harm (*e.g.,* separating from the abuser can result in further violence) (Cross, 2019), which we, as design researchers, need not to replicate in the design process.

To design for harm reduction, we must first develop a deep understanding of our participants' needs, choices, and community practices related to DV (Cross, 2019). To understand the unique needs of Muslim victim-survivors, in both the problem formulation and analysis phases, I developed empathy toward the survivors' choices and needs by following an Islamic feminist sensitivity toward understanding the historical, cultural, and political contexts of Muslims in Saudi Arabia and the US. For example, due to historical discrimination and in response to political events in the US (Ali, 2017), the mosque acts as a spiritual sanctuary and a community-building and service provision space (Hammer, 2019). Participants refrained from resorting to or navigating

governmental services, preferring to tolerate the abuse or reach out to community leaders (imams) when consequences got dire. In fact, imams may have a tight coupling with the local police stations to provide contextual support for DV cases. Another aspect of community practices was resorting to male allies to confront abusers or advocate for the victim-survivor. In some cases, male allies were acquaintances of the abuser, who leveraged the trust and social standing they have with the abuser, while in other cases, they were community members who voluntarily confronted abusers at their homes to stop the abuse.

By taking Islamic feminist and harm reduction stances, I support and consider designing around women's agency in seeking cultural, religious, and spiritual guidance to overcome, deal with, and heal from abusive situations. For informed decision-making, we can start by advancing the current DV tools, such as the national DV hotline website[21]. While it provides context-based information and a local-resources search option based on services and population (including "Muslim"), there remains space for improvement. For inclusivity, a way to start is to include content translations of both widespread and niche immigrant spoken languages (currently, it only provides English and Spanish). Another is to expand the definitional information to account for broader forms of abuse (*e.g.,* spiritual abuse), cultural-based information countering abuse (*e.g.,* rooted in religious beliefs), and enablers of abuse (*e.g.,* in-laws, community leaders). Knowing imams are first responders (Karamah., 2015) and the role and involvement of community members, we recommend designing for imams and male allies. One imam we spoke to followed a transformative mediation approach where she believed victim-survivors had the power

[21] National Domestic Violence Hotline. The Hotline. (2022, June 13). Retrieved November 21, 2022, from https://www.thehotline.org/

within them to reach the decisions that worked for them, and her role was to help them tap into that power instead of offering them solutions. Another imam prioritized empowering women in the community by ensuring their safety at home, providing positions within the mosque communities, and connecting them with the resources they needed. While another worked directly with police officers, issued restraining orders, and followed up periodically to monitor the situation and reassure their support. Imams offered mediation with abusers and spiritual support for victim-survivors. Thus, including community resources, such as spiritual leaders and social networks, on the hotline webpage as an intermediary step to seeking advice may help make the process less intimidating for individuals who are in non-physically threatening situations or their sensemaking process (Xiao et al., 2022). Nevertheless, the imams' roles are limited at best and often cause further harm. Thus, we view extending previous work on designing for responsibility (Bellini, Forrest, Westmarland, & Smeddinck, 2020) as a harm reduction strategy is vital in this space, where non-abusive behavior for community leaders and members is encouraged. I designed for responsible faith leaders by creating a space to build their knowledge on how to support victim-survivors adequately and directly access credible sources, professionals, and care providers (*i.e.,* a centralized portal with evaluated resources) (see Table 5 and Appendix B). Another suggestion is to build fact-check simulators to enhance and test their knowledge, training them to provide sufficient advice and practice their actions in a safe environment where potential consequences are presented based on trauma-informed and spiritually rooted information. For community members, reducing harm can be done by providing spaces for abusers to interact with and be mentored by vetted imams and influential community members, and

for imams to be mentored by trained and senior imams. Lastly, I suggest expanding the concept of providing peer support (Bellini, Forrest, Westmarland, & Smeddinck, 2020) to include diverse community members' roles who are part of the DV ecosystem; for example, having an open line of communication between social service providers, imams, police officers, and advocates, sharing resources and best practices, and collaborating in interventions when needed with checks and balances to limit power differentials.

The designer's role's valuable in enhancing safety and reducing negative repercussions according to survivors' choices, whether by relying on religious support, community practices, or governmental services to alleviate the ramifications of abuse. It is difficult to guarantee a harmless route when dealing with DV; however, centering survivors' agency and working on their capacity to make informed decisions is critical in providing DV justice.

7.4.3. Designing for Accountability

Accountability is an SCTJ value perceived as a critical mechanism of justice and a powerful tool of transformation (Five, 2007). Within HCI, accountability has been discussed as a dimension of social justice-oriented research (Lynn Dombrowski et al., 2016), defined as holding people who encourage or benefit from oppression responsible and setting restrictions and appropriate penalties (Lynn Dombrowski, Ellie Harmon et al. 2016). In this context, people who may benefit from or encourage oppression include abusers, community members, leaders, and service providers who play a role in enabling abusive behavior directly (*e.g.,* by siding with the abuser, blaming or shaming victims) or indirectly (*e.g.,* sustaining harmful patriarchal practices). A distinctive attribute of SCTJ is that the person who has done harm is perceived as a product of societal or systemic

harm, meaning they too have been subjected to harm by their communities. The implication is that because their behaviors are learned, they can be unlearned (Chatterjee, 2019; Mingus, 2019a). For example, gender-based violence is viewed as an outcome of patriarchal beliefs, especially around masculinity (API_GBV, n.d.), harming both males and females. Masculinity, which "refers to the roles, behaviours and attributes that are associated with maleness and considered appropriate for men"(Women., n.d.), is often associated with being tough and disassociated from emotions, resulting in emotional immaturity and communication problems. Systemic discrimination is another form of harm abusers undergo in the context of DV in the Muslim community (see Section 2.1), which may result in unresolved traumas leading to abusive behaviors (Maldonado & Murphy, 2021). SCTJ prioritizes the victim-survivor's wellbeing over the abuser's rehabilitation, and highlighting the abuser's circumstances do not justify abuse. Instead, such a perspective provides space for restoration through accountability and long-term support, and grounds for changing the conditions that engender and sustain the abuse.

Within relationships, accountability is defined as "willing to interrupt problematic behaviors or dynamics and then support a process for transforming those behaviors" (Five, 2007), and requires: 1) stopping immediate abuse, 2) acknowledging the harm done and its negative impacts on individuals and the community, 3) making appropriate reparations, and 4) committing to a non-abusive future. In the context of DV, accountability involves the enablers of harmful behavior, including the abuser, community members and leaders, and service providers. In transformative and restorative justice models, the abuser's accountability process may involve other community members as part of the support system. However, the community is only involved when

community members' capacities are built to "support the intervention, as well as heal and/or take accountability for any harm they were complicit in." Communities can be complicit in DV by "ignoring, minimizing or even encouraging violence"(Interventions, 2012). Thus, accountability in SCTJ is a dual process; abuser accountability and community accountability, as a route to achieving collective liberation and individual justice (Five, 2007). The concept of community accountability is also rooted in Islamic thought (*i.e.,* the notion of *ummah*), where Muslims are encouraged to take care of community members to the best of their ability (Bassiouni, 2012). Here, we see a cultural alignment between Islam and the restorative justice concept of *pods*, which are social structures that provide immediate and on-going safety, accountability, healing, and resilience to both parties (*i.e.,* the survivor and abuser) (Mingus, 2016). The significance of pods within SCTJ is to hold both parties (the survivor and abuser) accountable, aid in their healing process, and ultimately transform the surrounding community to promote anti-DV beliefs and foster adequate healing resources. The pods concept can be integrated within social networking groups, for example, by including resources (*e.g.,* vetted therapists, advocates) and information around healthy masculinity and families, peaceful relationships, emotional coping in groups related to moral or social support (*e.g.,* social initiatives and mosque pages), and potentially used as an intermediate circle where individuals are vetted for anticipated abuse, similar to the reporting tool design (seen in Appendix B), without the punitive aspect of public reporting.

Within HCI, accountability has been discussed as a dimension of social justice-oriented research, defined as holding people who encourage or benefit from oppression responsible and setting restrictions and appropriate penalties (Lynn Dombrowski et al.,

2016). Bellini et al. follow the notion that abusers can unlearn abusive behaviors, and provide moral responsibilities for perpetrators to refrain from abusive acts (Bellini, Forrest, Westmarland, & Smeddinck, 2020). Specifically, designing for the moral mechanisms of self-awareness, where abusers acknowledge their role in causing and accepting blame for their abusive actions, and acknowledging the extent of harms of their behaviors on others, both support the second step of the SCTJ accountability process (*i.e.,* acknowledging the harm done and its negative impacts on individuals and the community). For example, by showing examples of children or older family members (*e.g.,* parents or in-laws) addressing the consequences harmful behavior had on them and relating it to the actions of the abuser, the extent of harm is depersonalized and presented away from direct blame. When designing for self-awareness of abusers, I propose designing for ways to acknowledge not only the harm they have done but how they have benefited and were harmed by the community and the system that may have contributed to the abuse. For example, by connecting them to reformed abusers and professionals who can walk them through alternative futures. A central aspect of accountability is properly apologizing by admitting the harm inflicted and providing reparations to compensate for harm and as a form of commitment to change, especially for those who wish or have no other choice but to remain in the relationship [40]. Technology can be leveraged to guide the apology process through textually analyzing written forms of apologies and providing digitally generated guidance or connecting abusers to mentors who can help them in forming their apologies and reparations. When it comes to community accountability within marginalized communities, it is not a straightforward process. In the literature and the data, we point out the complexity of what historical

discrimination can lead to; participants were receiving strong messages from their communities around the need to conceal conflicts from the public and avoid interacting with the criminal justice system in fear of reinforcing stereotypes about Muslims and Islam, and of triggering further harm through the system (*e.g.,* unlawful charges, deportation). Another issue is confronting deeply rooted patriarchal beliefs, such as justifying aggression as a form of discipline or viewing divorce shamefully as an act of destroying the family unit. Intergenerational trauma and patriarchal ideology lead to cycles of abuse; where victim-survivors fear reporting abuse and are often faced by denial within the community when they do report, making it hard to hold members accountable. Thus, to build the community's capacity, extensive work needs to be done to heal intergenerational cycles of trauma and abuse. Advocates and specialized organizations are doing this on a small scale, training their staff to identify their traumas and learn how to dissociate them when engaging with victim-survivors. However, these are dispersed efforts that do not encompass the mass need. Such work requires change on policy and grassroots levels. Organizations, faith institutions, and mainstream services handling DV require culturally-sensitive trauma-informed training for their employees, board members, and volunteers, and policies that enforce and evaluate such activity. A way to build community accountability is to focus on advancing technologies to bring people into an environment sensitive to their needs and triggers and focused on trust-building. Another aspect is to consider ways to incentivize, through design, community members (*e.g.,* imams, service providers) whose capacities are overwhelmed. Though this is not in the scope of this work, I find incentivization to be key in designing for community accountability.

Lastly, accountability in design starts with the researcher. Researchers carry the responsibility of accurately representing the participants' sentiments, by co-collaborating throughout the design process. As scholars, it is our responsibility to work on "de-othering" marginalized populations; by showing the historical conditions they face, presenting cultural nuances away from reinforcing stereotypes, and working alongside them towards their goals and aspirations. Lastly, as scholars working on social issues and with communities, I join fellow HCI scholars in calling for a shift in the academic model of celebrating research exclusively based on publication metrics and rather placing equal emphasis on authentic community collaboration, streamlining academic research through social media, blog posts, and traditional media dissemination, granting access to research findings and interventions in forms of relevant reports and tools, and involving community members in academic production processes (Erete, Dickinson, Gonzalez, & Rankin, 2022; Fiesler, 2019; Howard & Irani, 2019).

7.4.4. Designing for Systemic Change

Research around social justice is typically slow, evolving, and cumulative work conflicts with the fail-fast corporate logic and design "solutions." Where technology is developed and is perceived to solve problems almost instantly, which is mostly not feasible in social problems (Kolko, 2012), and worse, may often cause more harm than good (Sterling, 2013). Anti-DV organizations' interventions are ongoing, lengthy, challenging, and aim toward long-term results. In the data, I saw examples of this, as a well-established organization is only now yielding the fruits of 30 years of prevention initiatives with local police.

Designing for systemic change involves highly collaborative approaches from the very start (*i.e.,* problem formulation). I partnered with different stakeholder groups with "experiences with and/or work to end oppression" (Lynn Dombrowski, Ellie Harmon et al. 2016) to formulate our problem space and produce design directions. Further, I support previous calls to being upfront with our participants or users about the research's goals and recognizing the limitations within the process (Lynn Dombrowski, Ellie Harmon et al. 2016, Asad 2019). In this work, I emphasized the possibility of harm for participants and what the immediate outcome and goals of this research are; an intermediary step to inform potential future product development, shifting the conversation within the technology design community, and ultimately, narrowing the gap between current tools and Muslim victim-survivors' needs.

Designing for systemic change moves away from product-based concerns to focusing on collective practices and sociopolitical concerns, where unjust practices and policies are highlighted, designing for evolving relations that produce inequalities is valued (Lynn Dombrowski, Ellie Harmon et al. 2016), and community partners are empowered to envision "what healing looks like for them" (Asad 2019). The purpose of SCTJ's focus on the underlying conditions enabling the abuse is to remain critical of harmful structural and social aspects and, ultimately, change them. SCTJ experts find these unprecedented times of protests against police brutality and political interest in change as an opportunity to "rapidly build the infrastructure necessary to nurture a robust transformative justice future" (Mimi E Kim, 2021). Alternative justice theories afford ways to expand options to center and serve survivors rather than limit them and build sensitivities towards individual, social, and systemic justice within research and society

(Mimi E Kim, 2021). I encourage HCI scholars to elaborate on ways to make long-term sustainable justice work more rewarding in research and design. Creating systemic change requires policy-level research and ethics lobbying, which starts in our academic institutions and industrial corporations. Technology is no longer a standalone tool; it shapes our political views and realities (Chou & Fu, 2017; Fujiwara, Müller, & Schwarz, 2021). Thus, interdisciplinary work is needed more than ever.

Chapter Eight: Conclusion

In this dissertation, I conducted a rigorous human-centered investigation to uncover how victim-survivors of domestic violence navigate abusive situations and reach out for support and the challenges they embark on during their healing journeys. My work contributed theoretically, methodologically, and empirically to the field of HCI, where it addresses the overarching research question:

> *"How can we, as design researchers, incorporate key survivor-centered transformative justice attributes into design rooted in the sociocultural, historical, and political context of Muslim domestic violence survivors in the US?"*

I address the above question by inferring from Islamic feminist, social work, trauma-informed care, and social justice approaches, namely restorative and transformative justice. Consequently, I introduce survivor-centered transformative justice, an approach that aims to expand victim-survivors' options by meeting them where they are and support reaching their goals while protecting against community, structural, and technological harm.

This work meets the following aims:

Aim 1: Identify DV forms and intervention dynamics, help-seeking, challenges faced, and healing processes in domestic violence situations within Muslim communities in non-Western (*i.e.,* Saudi Arabia) and the US contexts.

I attended to this aim in chapters Four and Five, where I answered the following research questions:

> **RQ1:** What are the types and dynamics of DV within Muslim communities in Saudi Arabia and in the United States?

RQ2: What does the help-seeking process look like for survivors? What are the steps taken in identifying the abuse, support, reporting, mediation, coping strategies, and leaving the abuse? Whom are the stakeholders involved (the ecosystem of support)? And what are the challenges survivors face within the immediate and larger community during their help-seeking and healing journeys?

RQ3: What is the role of technology in dealing with DV? And what are the concerns that experts (*i.e.,* survivors, service providers, advocates, faith leaders (*i.e.,* imams)) have around technology? And how do they envision/perceive technologies to work in addressing their challenges and concerns? When is technology harmful or ineffective?

RQ4: What are the values of Muslim survivors, and how can we design towards those values?

Aim 2: Identify and evaluate key design attributes for survivor-centered transformative justice, trauma-informed care, and Islamic feminism for domestic violence interventions.

I addressed Aim 2 in chapters Five and Six of this dissertation, by answering the following research questions:

RQ1: What current SCTJ practices address DV in the Muslim community?

RQ2: What is the role of ICTs in advocating for and supporting survivors' decision-making? Promoting accountability for abusers and enablers of abuse? And broadly, in influencing the community to respond effectively to abuse?

RQ3: How do we integrate trauma-informed healing principles, include allies, facilitators, and resources, direct stakeholders, and facilitate working together

as a team, support survivors-victim, and promote community accountability in design?

RQ4: How are the proposed design principles from an SCTJ lens perceived by experts working extensively in the DV space? When can technology-mediated interventions be harmful in this context?

8.1. Chapter Summaries

In each chapter, I have demonstrated the following:

Chapter One: I outlined the complex issue of domestic violence and how victim-survivors' experiences vary based on their identities. I expanded the definition of DV to include family violence and intimate partner violence and summarized the approaches taken throughout this dissertation. I stated the research questions guiding this research and provided a contribution statement highlighting the methodological, theoretical, and design contributions this dissertation offers.

Chapter Two: I showed the sources of literature used to formulate and inform this work, extensively described the theory-building process, and discern current gaps in the literature and how this dissertation builds and expands on previous research and covers unexplored areas in HCI.

Chapter Three: In chapter three, I showcased the various qualitative and design methods used to address the above research questions thoroughly and effectively by collaborating with varying stakeholders in the DV ecosystem.

Chapter Four: This chapter closely examined the DV forms experienced by Saudi women and the sociotechnical practices they draw on in addressing the abuse. The

findings were analyzed in light of an Islamic feminist lens which allowed us to present commonly disregarded acts such as managing abuse and resorting to patience as forms of agency and requiring resilience.

Chapter Five: This chapter demonstrated the case study of DV in US-based Muslim communities and the individual, social, and system challenges survivors undergo as they deal with domestic violence services and resources. This chapter provides insights into applying survivor-centered transformative justice, a comprehensive approach to addressing abuse and the underlying conditions sustaining DV.

Chapter Six: Chapter Six empirically and through design explored the following SCTJ social mechanisms: survivor advocacy, community accountability, and community transformation, to establish healing structures for survivors and their communities. I argue that for or SCTJ mechanisms to flourish and be effective, they need to be simultaneously executed.

Chapter Seven: In chapter seven, I explored ways to design healing structures by using technology as supplemental to on-the-ground efforts while being critical and attentive to potential harms arising from design. This chapter provided reflections on improving our research ethic, methodologies, and design implications to avoid reproducing harm through HCI practice.

This research plays a crucial role in enhancing our comprehension of domestic violence within Human-Computer Interaction (HCI). It emphasizes the significance of sensitivity when working with marginalized communities and addresses the complex task of designing solutions that consider the various layers of oppression. This entails

addressing individual instances of injustice and examining the root causes that contribute to such injustices.

Appendices

Appendix A: Focus Group Activities

This document includes the outline and content of two focus group workshops and interim activities.

Group size: 2-5 per session**. Participants:** Domestic violence (DV) social service providers, DV survivors, mosque representatives/religious leaders.

(F) facilitator. **(P)** participant

Focus group workshop. 1: Defining/identifying TJ processes

Time: 1:30-3:00 hours.

Overview: This workshop aims to understand transformative justice processes within real-life/raw settings. Specifically, how to support DV survivors while holding the community accountable.

Definitions:

- **Transformative justice:** aims to provide survivors with immediate safety and long-term healing while holding the community accountable and transforming the root causes of abuse. *****
- **Community accountability:** strategies that aim to prevent, intervene in, respond to, and heal from abuse by strengthening relationships and communities, mutual responsibility for addressing conditions allowing abuse, and holding people accountable *****

Goal: to conceptualize TJ and identify tangible steps of TJ processes around community accountability and survivor advocacy.

Does anyone have any questions?

Engagement guidelines:

1. Your participation in this study is voluntary, meaning you have the option to withdraw at any time or skip a question if necessary. Your information will remain confidential, and the session recordings and transcripts will be stored securely in the Indiana University cloud storage.
2. As a heads-up, there is an optional interaction over Google slides, which might be challenging to do from a mobile phone, so please use a laptop instead of a mobile phone to join the session.
3. If you have a question during the session, you can either use the Zoom chat or ask in person by raising your hand or using the "reactions" button to raise a virtual hand.
4. Finally, this is a safe space for everyone to share their experiences without shame and with great empathy. If you prefer to participate without your picture showing, text, or privately in the chat, feel free to do so.
5. Is there anything you'd like to add to these guidelines?

Opening Activities

- **Introduction (5-10 minutes):** name, organization (if any), mention one thing you do to destress these days?

Activities (30-40 minutes): Defining Transformative Justice (TJ) Processes

This section will take a deeper dive into a collective understanding of TJ and its processes in the context of DV.

TJ & Survivor support

- What comes to mind when you think of justice for DV survivors? (Share your thoughts by writing on slide#3 in this Google slides deck).
- Today, what does justice look like for DV survivors within the Muslim community in the US?

    - What are the resources available to Muslim survivors in your community/ organization? (share your thoughts by writing on slide.4 in this Google slides deck)
        - What is effective?
        - What is lacking, and how can support be improved?
- As a person who has experienced DV, how would you have liked to be supported? (Answer privately on slide#4)
- As a person who offered support to someone who experienced DV, how did you handle the situation?

TJ & Community accountability

If you have dealt with abusers in the past, can you take a moment to recall a time when you helped abusers stop and acknowledge the harm they have caused in the community and to their partner or family member.

1. What worked well?
2. What hasn't worked so well?
3. Did the abuse stop? If so, how?
4. Who did you involve to help in the process, and why?
5. What did you do or say to make them recognize and acknowledge the harm they have done?
6. Can you think of any technology you used during that time?
7. If you had the power and resources, how would you transform the community to counter DV?

--- 10-minute Break ---

Scenario.1:

Aida, a convert (to Islam) of Hispanic descent, is being emotionally abused by her husband, Latif. He controls her outs and about and refuses her the opportunity to work. Aida moved from Texas to Ohio when they got married two years ago and

does not have family in the area. Aida told the few friends she has at the mosque about the abuse and they advised her to reach out to the mosque's liaison for help.

Things got a little rocky after speaking with the liaison, who delivered Aida's plea to the imam (the mosque's religious leader). The imam hesitated to approach Latif because he was a committee member of the mosque's board and did not want to lose his financial support to the mosque. The imam approached Aida instead, encouraging her to speak to her husband about the issue. When Latif insisted that he did not do wrong, the imam advised Aida to be patient and pray to God to change things for her in the future.

Questions:

Survivor advocacy:

1. What is the harm that Aida is facing?
   In the same shared slides (slides 6 onwards), feel free to answer the following questions by writing your thoughts or saying them out loud and discussing them with the group
2. What does Aida need right now?
3. In what way do you think community members affected Aida's situation (her friends, liaison, and imam)?
4. How would you support Aida if you were a member of her community?

TJ and Community accountability:

1. In your prior experiences, what factors do you think could be contributing to the abuse in this scenario?
   a. How can we as a community prevent this from happening?
2. Think of your role as a social service provider, survivor, or faith leader. How would you approach:

a. The imam to provide sufficient help?

b. Latif to stop the abuse and acknowledge the harm he's done?

c. In what ways would you hold them accountable?

3. Given what we discussed, what solution would work best at addressing DV?

Scenario.2

Fatima, an immigrant originally from Pakistan, is a mother of two, ages two and four, and lives with her husband and in-laws in New Jersey. Ahmed works two jobs, making him absent most of the day. He and his parents expect Fatima to do the housework and take care of the kids. Fatima never had the chance to learn English, study, nor work outside of the home since the day she arrived to the US.

The day Fatima spoke to her husband about the mistreatment she is getting from his parents, he was infuriated and started blaming her for their behavior and questioning her morality because she did not respect the elders in the home.

His behavior only worsened afterward. One time, he shoved her towards the wall and strangled her in front of the kids, after a dispute that started when she insisted on enrolling in the ESL classes at their community college.

Fatima took the risk of sneaking out of the house and went to the local police station. With basic English, she tried to explain her situation. The police officer was not very cooperative and responded with, "isn't that part of your culture?"

Questions:

Survivor advocacy:

5. What is the harm that Fatima is facing?
6. What does Fatima need right now?
7. How do you think community members affected Fatima's situation?
8. How would you support Fatima if you're a member of her community?

TJ and Community accountability:

1. What is causing the abuse in this scenario?
2. What kind of harm do you think Ahmed experienced that may have perpetuated the abuse?
3. Think of your role as a social service provider, survivor, or faith leader. How would you approach:
1. the in-laws to change their behavior?
2. Ahmed to stop the abuse and acknowledge the harm he's done?
3. In what ways would you hold them accountable?
4. And the police to understand the situation and provide support?
4. Given the different solutions that we discussed, what has to be right for this to address the root causes of DV?

--- 10-minute Break ---

Reflection:

- After what we've gone through, how would you define TJ for your own situations and make it more concrete for yourself & the groups you work with?
- With Aida and Fatima's cases in mind, what is your ideal process to advocate for survivors in our community?
- And with keeping Latif and Ahmed's situations in mind, what is your ideal process to work towards community accountability?

Closing:

- We're coming to the end of our session. Is there anything else you would like to share before we close for today?
- I look forward to seeing you again in our second group session after two weeks. Would the same time & day work for you?
- In the meantime, I will be sending out an email to schedule a short one-on-one activity.
- Thank you all for your time and engagement!

<u>Interim Activity</u>

Give participants the choice to either have a live conversation over Zoom/Facetime, etc., answer some prompts textually, or sketch some ideas and share with the facilitator (giving options is following a feminist standpoint approach).

- **Sketching activity:** During the next few days, use any craft tools or just a pencil and paper to imagine and sketch ways you would envision doing X,Y, Z in a virtual environment. (X,Y, Z are specific examples from session.1 on encouraging community accountability and providing survivor support)
    - Tools: paper and pencil, craft tools, google doc or slides, photos.
- **Diary entries/interview questions:**
    - Prompt:
    - Do you use technology in your practice / organization / daily routine?
    - From your previous experience and the conversations, we had in our session, how would your interactions with the abuser and other community members be different if it were through a mobile application or in a virtual environment?
        - In what ways would the design/technology help the survivor?
        - What concerns do you have about this technology?
    - After two days, thinking back to the ideas you've written, can you think of other ways to improve them?

*Due date: before our next meeting, send them to the facilitator's email or text via WhatsApp/text messages.

(F): prototypes the designs/ideas submitted by participants

Focus group workshop.2: Integrating community accountability and survivor support online

Time: (45 - 60 minutes)

Overview: This workshop aims to transfer or adapt TJ processes around supporting survivors and encouraging community accountability into an online environment while taking into account the risks and challenges of this migration.

Goals:

- Envision ways to design for community accountability and trauma-informed survivor advocacy.
- Identify risks and challenges in addressing DV virtually from a TJ perspective.
- Identify ways to mitigate risks of DV advocacy online.

Supplies:

Physical: Blank papers, pens, markers

Virtual: Zoom, Google slides

Opening tasks (15-20 minutes):

(F) Present findings from the previous workshop (visuals, summary)

(F) Present submitted ideas in prototype forms to jumpstart the discussion

(P) group conversation where each participant explains their submitted ideas

(P) answer: what did you find difficult about this task?

Activities/prompts (30-40 minutes) :

1. Take 10 minutes to think of/sketch/write ways to mix your idea with another participants' idea.
2. Go around the room and present each participant's design(s)
3. Group conversation:

a. In what way does this design align with TJ?

b. As a group, from the presented designs, identify the 4 top features that you find absolutely important to have to support survivors.

c. From the presented designs, identify the 4 top features that you find absolutely important to encourage communities' accountability.

d. What risks/concerns do you see for users using this feature/design?

1. How can those risks be mitigated?

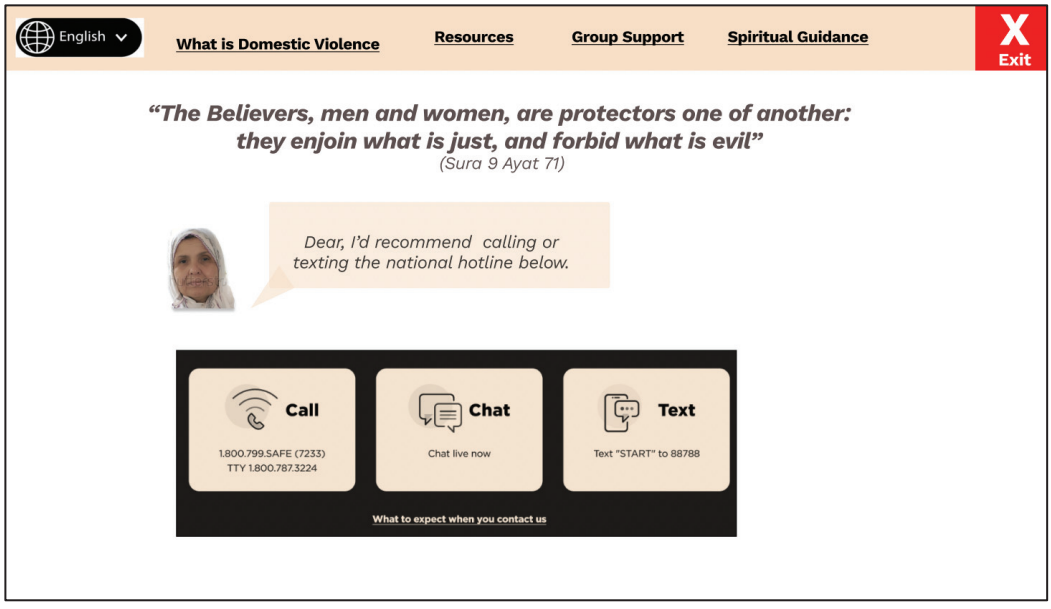
Closing:

1. Thank you for sharing your experiences and participating in these workshops, we deeply appreciate it.
2. I will be sending a full summary of the workshops and their findings within two weeks.
3. If you have any questions, feel free to contact me by email or text.
4. If you or someone you know would like to participate in future activities, please let me know.

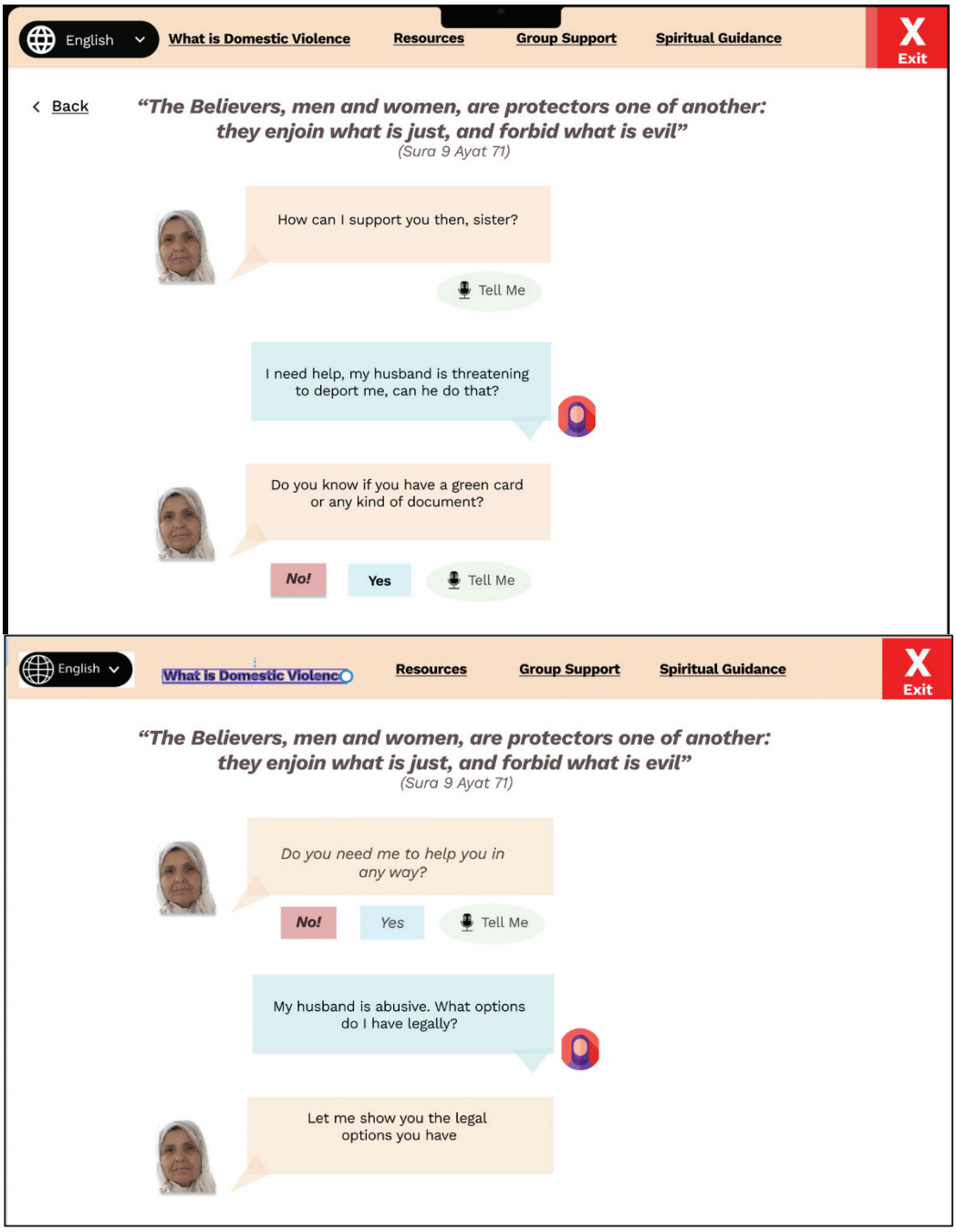
Appendix B: Design Concepts

1. **Web page:** this protype is intended to be a landing page for Muslim DV victim-survivors who are seeking help or knowledge to address an abusive situation in its different forms and phases.

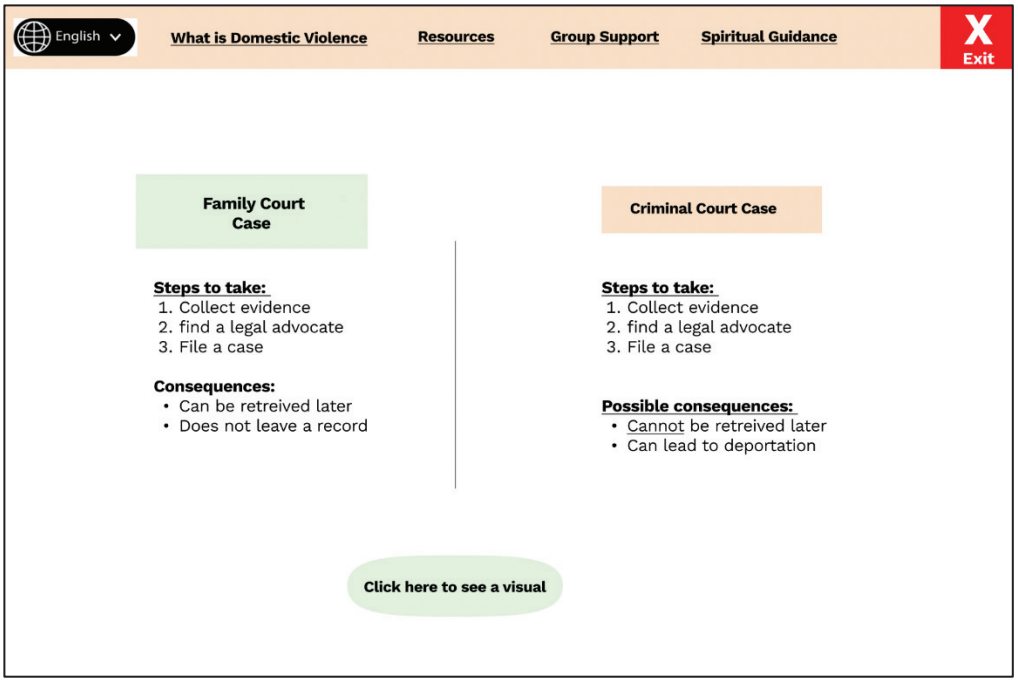
- **Page one:** a motherly figure appears and asks about safety. The user can choose to click on the buttong or enter their quest by text or voice.



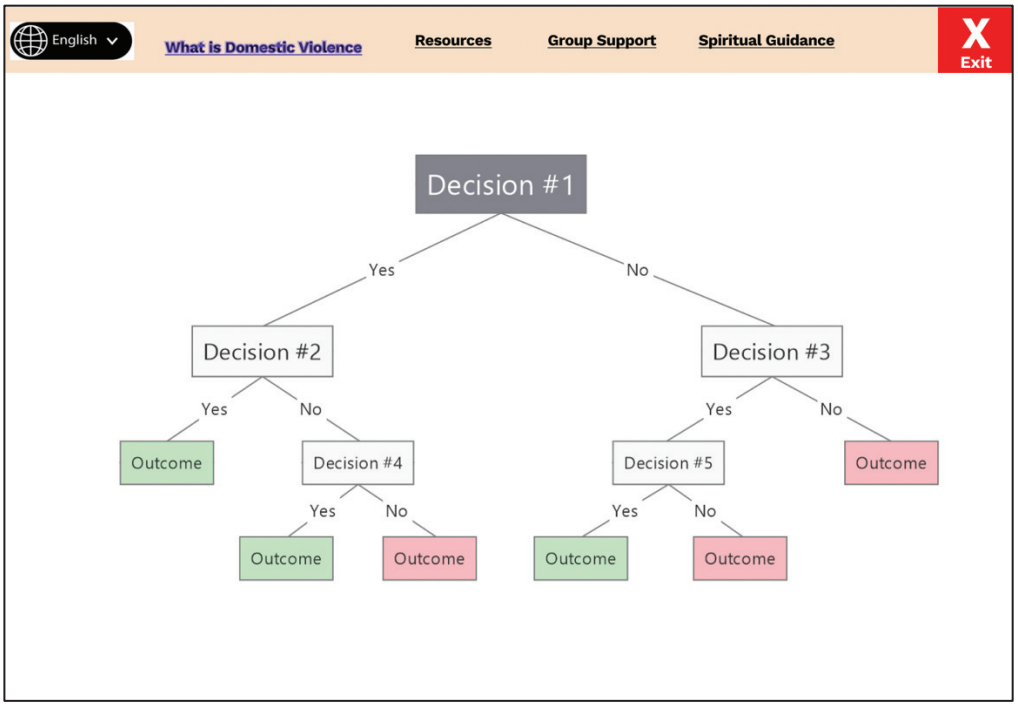
- The response to the user choosing "No", they do not feel safe.


English
What is Domestic Violence
Resources
Group Support
Spiritual Guidance
Exit
Back
"The Believers, men and women, are protectors one of another: they enjoin what is just, and forbid what is evil"
(Sura 9 Ayat 71)
How can I support you then, sister?
Tell Me
I need help, my husband is threatening to deport me, can he do that?
Do you know if you have a green card or any kind of document?
No!
Yes
Tell Me
English
What is Domestic Violenc
Resources
Group Support
Spiritual Guidance
Exit
"The Believers, men and women, are protectors one of another: they enjoin what is just, and forbid what is evil"
(Sura 9 Ayat 71)
Do you need me to help you in any way?
No!
Yes
Tell Me
My husband is abusive. What options do I have legally?
Let me show you the legal options you have

- Conversional examples on abuse and legal options.



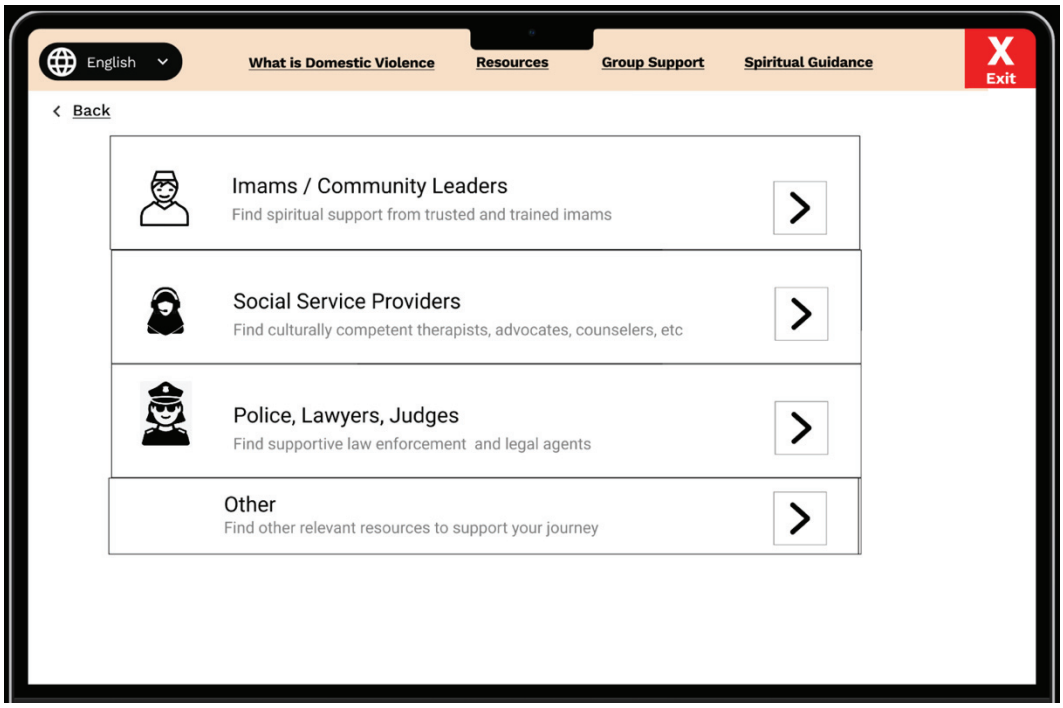
- A visual chart of two options the user can pursue, with clear steps and implications.



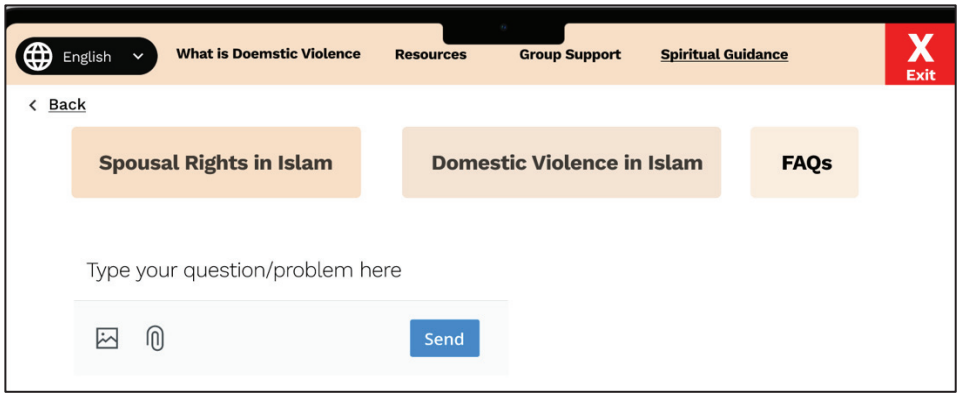
- A visual showing a decision making chart, which shows the route of the legal process or service process.

What is Domestic Violence
Resources
Group Support
Spiritual Guidance
Exit
What is Domestic Violence?
Domestic violence is a pattern of abusive behaviors used by someone to establish power and control over another person in a relationship.
Domestic violence sometimes follows a cyclical pattern: there are periods of calm, building up of tension, and then abuse. After a period of abuse, batterers are often apologetic, but as the cycle repeats the abuse usually gets worse over time.
Is spousal and family abuse allowed in Islam?
Are You Being Abused? - Omar Suleima...
Abusive Relationships
What abuse may look like:
VIOLENCE
PHYSICAL
SEXUAL
POWER AND CONTROL

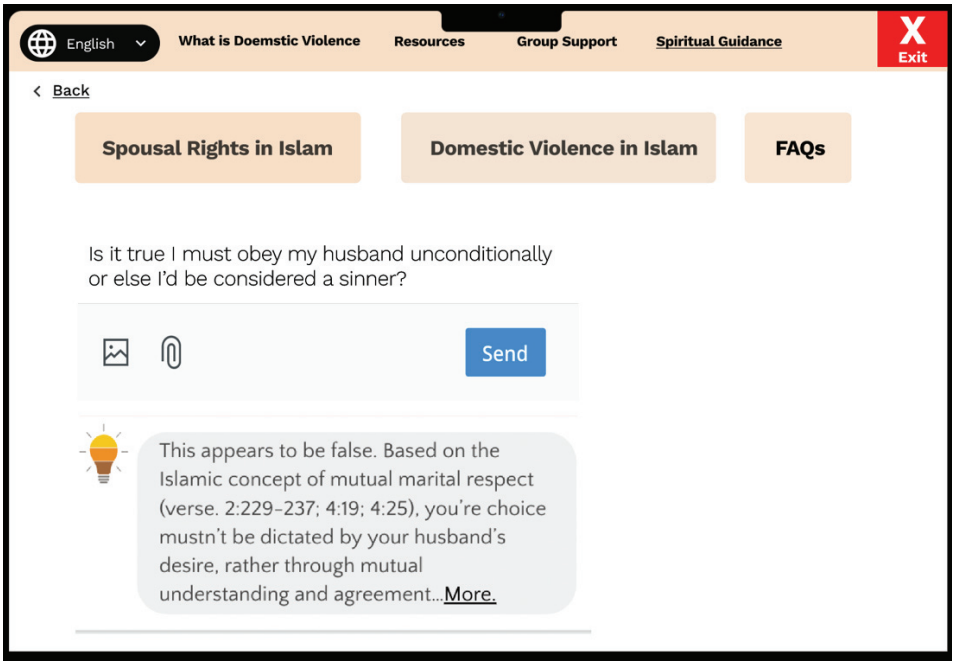
- The "What is domestic Violence" page, showing speritually-rooted information.



- The "Resources" page, showing vetted resources including trained imams, culturally-competent service providers, supportive law enforcement, and other resources (e.g., financial and skill building resources).



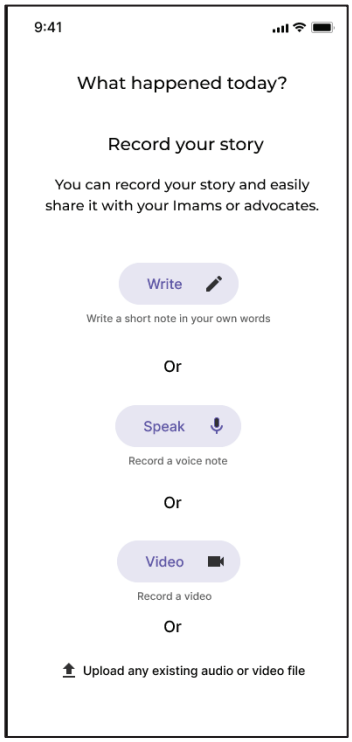
- The “Spiritual Guidance” page, showing three tabs including: spousal rights in Islam, domestic violence in Islam, and frequently asked questions. In addition to an open space for textual input to verify and understand abusive incidents from an Islamic perspective.


English
What is Doemstic Violence
Resources
Group Support
Spiritual Guidance
Exit
Back
Spousal Rights in Islam
Domestic Violence in Islam
FAQs
Is it true I must obey my husband unconditionally or else I’d be considered a sinner?
Send
This appears to be false. Based on the Islamic concept of mutual marital respect (verse. 2:229-237; 4:19; 4:25), you’re choice mustn’t be dictated by your husband’s desire, rather through mutual understanding and agreement...More.

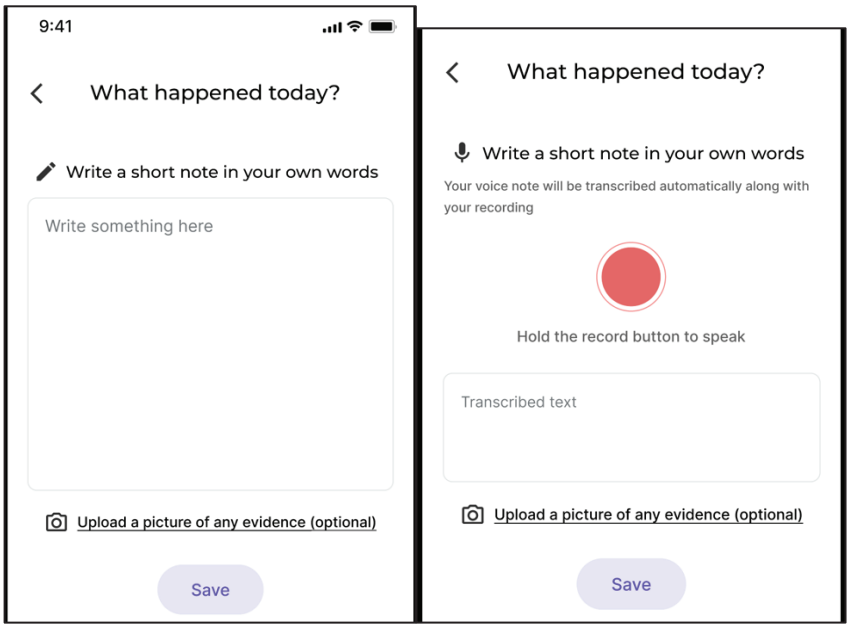
- An example of what the spiritual guidance space offers. When I user enters a question or concern, a response is generated based on Islamic feminist content.

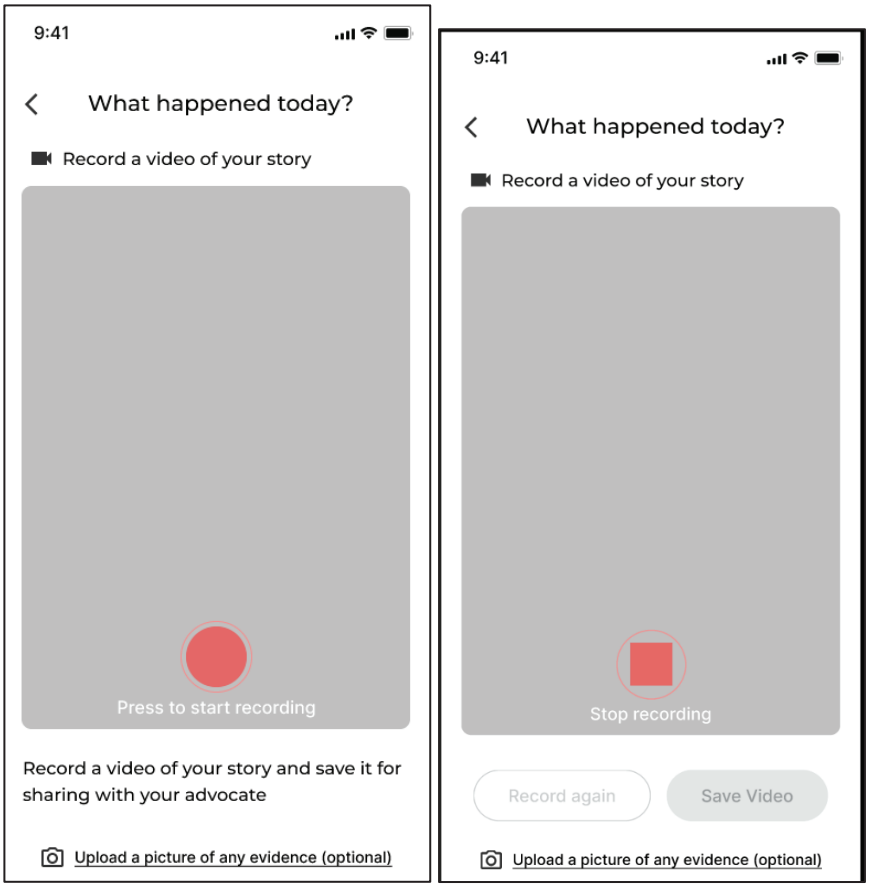
2. **Mobile application:** The mobile application prototype is designed for victim survivors as a tool to record abusive incidents, find trusted resources, and share their stories with their chosen ally (*e.g.,* imam, therapist, etc) without the need to

retell the story numerously, and for imams and adovactes to assist victim-survivors.

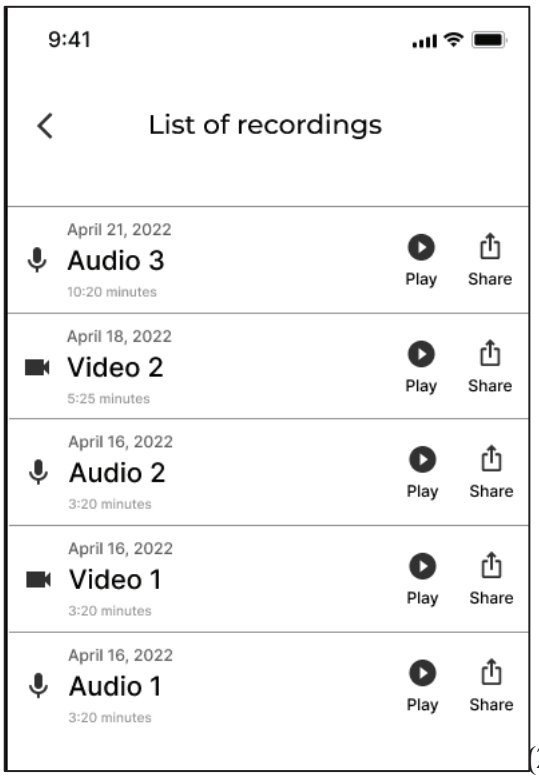


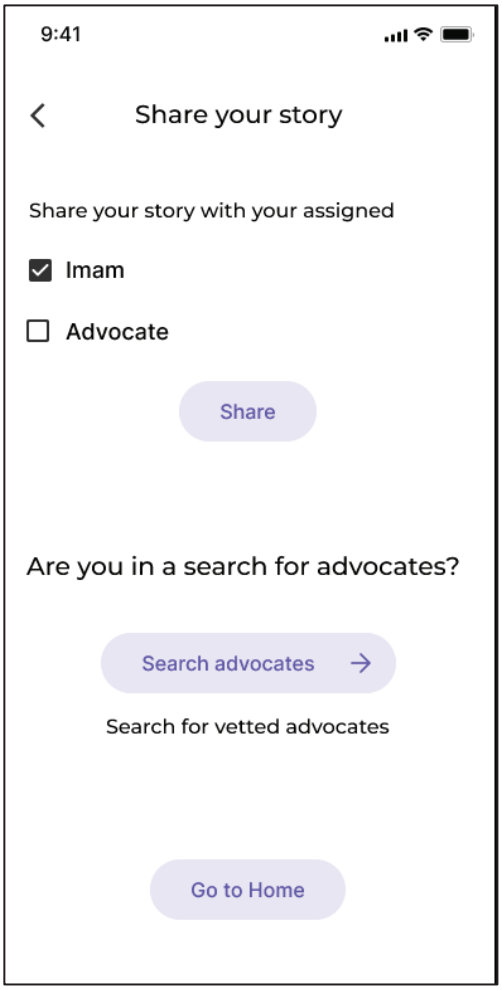
- Victim-survivor's interface: The mobile application home page.


9:41
What happened today?
Write a short note in your own words
Write something here
Upload a picture of any evidence (optional)
Save
What happened today?
Write a short note in your own words
Your voice note will be transcribed automatically along with your recording
Hold the record button to speak
Transcribed text
Upload a picture of any evidence (optional)
Save

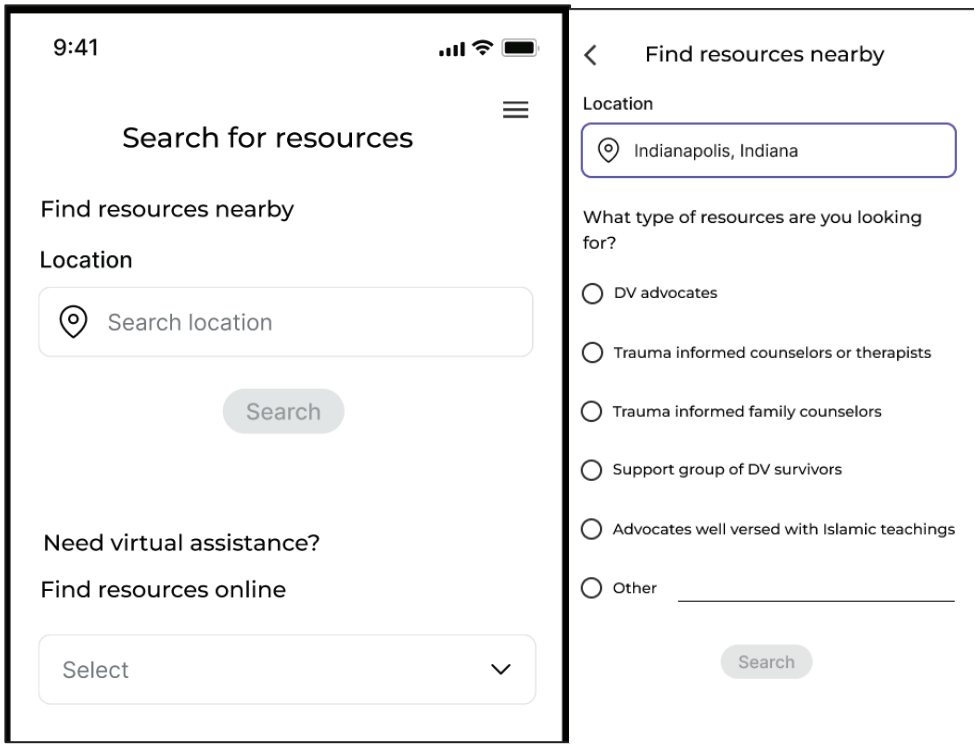

9:41
What happened today?
Record a video of your story
Press to start recording
Record a video of your story and save it for sharing with your advocate
Upload a picture of any evidence (optional)
9:41
What happened today?
Record a video of your story
Stop recording
Record again
Save Video
Upload a picture of any evidence (optional)

- Screens showing several ways the user can record an incident (text, audio, and video) and save it for future reference.

(1) 

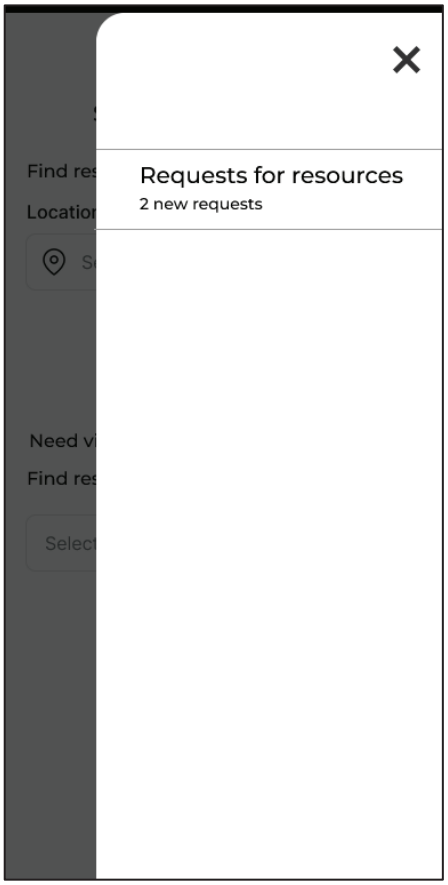
(2) 

- The saved files page, which allows the user to play or share the file (1), with pre-selected contacts or search for advocates (2).

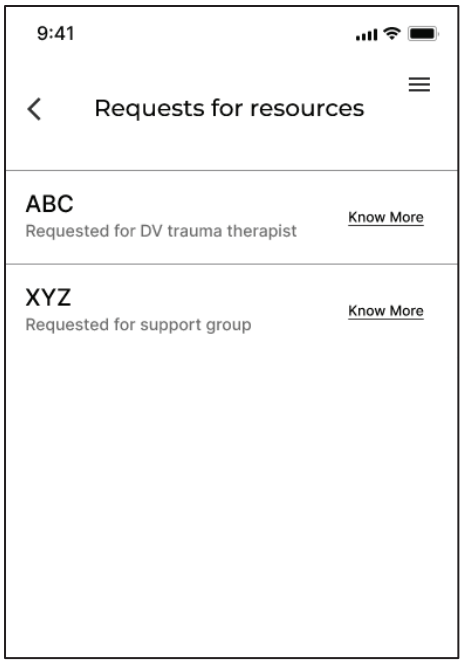


- The search for advocates feature allows finding resources locally or virtually.

(1)



(2)

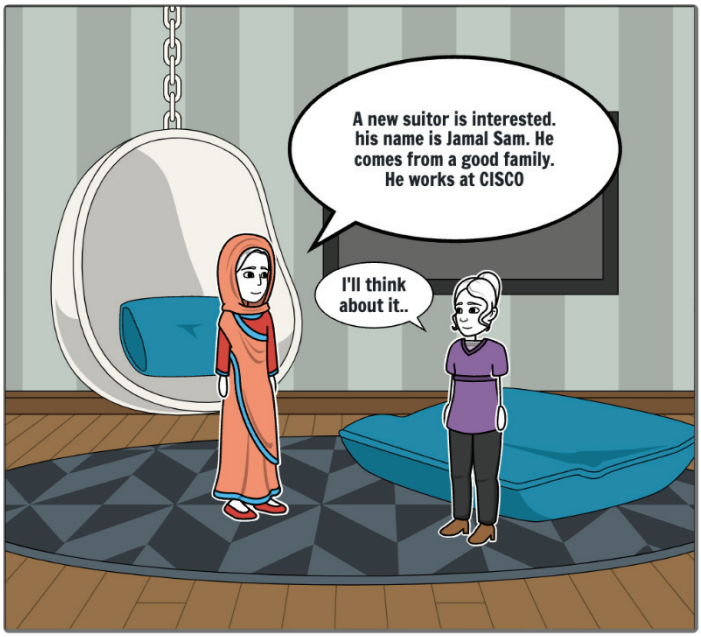


(3)

9:41
Details
This is ABC.
They are requesting for a therapist to help in their situation.
Here is their story
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis n...
More
Audio file: abcd1234.mp3
Look up most suitable therapists for ABC
Search

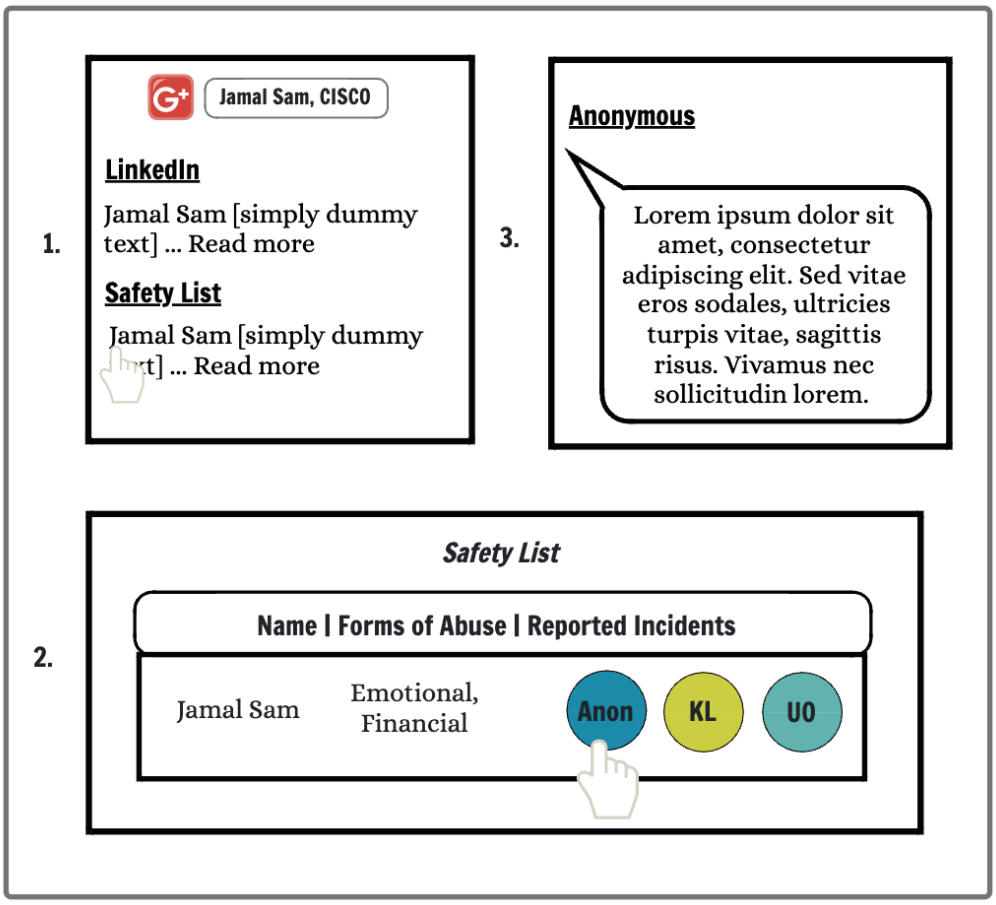
- Advocates interface: The clients' requests page to manage received cased and find relevant resources to assist the client (1,2,3).

3. **Storyboard:** the storyboard below (1, 2, 3) demonstrates a case scenario where the user finds a potential spouse's information online to identify any reported abusive behavior.



(1) A mother shares some information about a potential suiter to her daughter.

(2) The daughter looks up the suiter's information on a search engine.



(3) The search engine results show a "Safety List" profile (1), which includes the name, forms of reported abuse, and posts from multiple past partners (2). The post includes the story and can be anonymous (3).

Appendix C: Expert Interview Guide

Opening:

Thank you for agreeing to have this conversation. I'm Hawra, a PhD student in informatics, affiliated with IU.

Today, I hope to get input on what a just approach looks like for survivors and how to strive toward a survivor-centered approach when technology is involved.

To give you some context, this is the last phase of my dissertation study where I talk to experts to evaluate technology concepts that presumably center survivors. I would appreciate your honest input and critical lens on what is useful or harmful in these designs.

– introductions.

*** turn on transcription***

- This interview will take 30 to 60 minutes but can be tailored to your needs.
- For the purpose of transcription and analysis, Would you allow me to audio-record the conversation?
- We'll start with interview questions for you, and then go through the technology ideas we've produced. Do you have any questions before we begin?

Would you like to introduce yourself, what you do, and how you relate to DV?

Empirical Questions:

1. For non-TJ experts: how do you think we can change our community so that less DV happens?

8.1. for TJ folks — What does transformative justice look like in your practice?

2. What role does (or can) the Muslim community play in holding abusers accountable (or in preventing harm) for DV survivors?
3. Can you recall a good model example of when a domestic abuser was held accountable?
4. What is the role you play as a community leader/member to counter DV in the community?
5. How do you deal with issues of DV in your community?
6. How do you hold abusers and enablers of abuse accountable?

7. How can the community hold them accountable?
8. Are there things you wish you could do for survivors but currently cannot?
9. How do you make survivors feel validated and respected when they reach out to you? (dignified connection)
10. How do you use technology in your practice with DV survivors personally or professionally? DV-related services?
11. How do you set realistic expectations while fostering their autonomy in their decision-making process? (empowerment/informed decision making)
12. What are the sources of knowledge you use for spiritual guidance, if any? (empowerment/spirituality)
13. Are there certain strategies you use to ensure survivors' safety when they seek help online? (safety)
14. How can the community collectively support survivors? (solidarity)

Concept Validation Questions:

During the first part of this study, I did interviews and focus groups with survivors, advocates, and service providers. Based on that, I noticed that there were common connections and themes across my study, about how certain values should inform the design of DV tech for survivors.

Next, I will show you some prototypes (which are design ideas that not fully functioning yet) and would like to know your honest opinion about what could go wrong with such technologies if they were implemented. The purpose is to provide a handbook on what needs to be done to center survivors using technology and what potential harms we need to steer away from. Do you have any questions so far?

→ Link to prototype.1 ←

- This is a standalone, webpage tool, that is supposed to a comfort zone, where safety is prioritized, and the survivors' needs are met, and meet them where they're at.
- This prototype is showing a motherly figure, who is there to first, make sure the user is safe and meet them where they are (e.g., not push them to leave if they are not ready to). It will not be merely a chatbot, it will be a comfort zone, where safety is prioritized, and confidence-building would take place.

- For a trauma-informed and spiritually aligned design, The page has soft colors and a Qur'anic verse that supports healthy relationships and is against harm.
- The user has the option to change the language of the page to their preferred language, and can use text or voice as input.

10. What do you like the most about this tool?

11. What concerns do you have or think could be challenging for you or the community? What could go wrong with this tool?

12. Would you prefer having it as a standalone tool or embedded in existing pages?

13. One of the concerns raised was, how can we advertise such tools without falling into the liberal vs. conservative conflict? Do you have any thoughts?

→ Prototype.2 ←

In this mobile app that helps save the evidence and connect you with allies, the user is the survivor, can save incidents that happened in a form of text, images, or video, and be able to share it when needed with an ally (i.e., designated imam, service provider, or advocate). The survivor can also find local or virtual vatted resources or request them from their allies. The purpose is to provide a seamless interaction between survivors and their allies.

The advocates, service providers, and imams can use the same tool to find resources for and communicate with survivors.

- Repeat questions (10,11).

12) How can we build male-allyships within systems? Strengthen existing ones?

- (optional/follow-up)Would an ally network for interventions be an option "talking to the abuser? kids?, advice?"
- Or would tapping into preexisting local groups and institutions be more effective (e.g., a mediation service within mosques)?

The last idea I'd like to show you is a way to proactively deal with abuse,

*show storyboard and support examples

in this scenario, women are able to look up safety-related information for their potential suitors, here we see the mother

- How can information be verified in your opinion?
- When should they be added to the list? And when would they be removed? How can there be a space for redemption?
- Ideas to support a collective effort to heighten the awareness of the community around the different forms of abuse, rights, and resources.

a. is by storytelling; of survivors, known community figures, and reformed abusers.

b. Leveraging the "reels" feature on social platforms or short videos to show what forms of abuse exist and how to reach out for help.

Closing:

- We have come to end, thank you for your valuable insight. Is there anything else you'd like to share that we did not have time to go over?
- Would you prefer if I quoted you with your name or anonymously?

Thank you, I appreciate your time!

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Curriculum Vitae

Hawra Rabaan

Education

- Human Computer Interaction, PHD. Social Work minor. Indiana University-Purdue University Indianapolis. August 2023.
- Master of Science - Information and Communication Technology for Development. University of Colorado at Boulder, CO. May 2014.
- Bachelor of Science - Information Technology. King Saud University, Riyadh, Saudi Arabia. June 2009.

Publications

- **Hawra Rabaan** and Lynn Dombrowski. "Survivor-Centered Transformative Justice: An Approach to Designing Alongside Domestic Violence Stakeholders in US Muslim Communities". CHI 23.
- **Hawra Rabaan** Lynn Dombrowski. “Breaking stereotypes: Islamic feminism and HCI". Interaction (Spirituality in Design) 29 (4).
- **Hawra Rabaan.** “Exploring Transformative Justice Principles to Inform Survivor-Centered Design for Muslim Women in the United States”. CSCW 21.
- Tanisha Afnan, **Hawra Rabaan**, Kyle ML Jones, Lynn Dombrowski, “Asymmetries in Online Job-Seeking: A Case Study of Muslim-American Women”. CSCW 21.
- (*Honorable Mention*) **Hawra Rabaan**, Alyson L Young, Lynn Dombrowski. “Daughters of Men- Saudi Women’s Sociotechnical Agency Practices in Addressing Domestic Abuse”. CSCW 20. **Hawra Rabaan** and Lynn Dombrowski. “Designing for domestic abuse in Muslim Communities.” CHI2020 workshop proceedings.

- **Hawra Rabaan,** Sunandan Chakraborty, Alyson L Young. “Studying the Impression of Saudi People towards Current Social Changes.” CSCW 18.
- **Hawra Rabaan**, Sunandan Chakraborty, Alyson L Young. “Designing for Social Participation and Safety of Arab Women”. *CHi2018 Workshop Proceedings.*
- Sterling, Sarah Revi, Leslie Dodson, and **Al-Rabaan**. "The Fog Phone." *Interactions* 21.6 (2014): 42-45. Web.

Teaching Experience

- CST 252 - Scripting for Multimedia. Spring 2015. CSUM.
- CST 320 - Intro to Digital Games. Spring 2015. CSUMB.
- ARAB 1010 (5) Beginning Arabic 1. Fall 2012. University of Colorado Boulder.

Invited Talks

- University of Colorado Boulder March ’21
- University of Minnesota Feb ’21: Discussed my work with the GroupLens research lab at the department of computer science and engineering at UMN.
- Middlebury Institute of International Studies Sep '14 Discussed in depth cultural and language aspects of the Arabian gulf area for the Arabic Language program students.
- Air Force Academy, Colorado Springs, CO 2013: “Women and Gender in Islam” panel speaker.

Academic Service Work

- Peer Reviewer for multiple HCI top-tier venues (CHI, CSCW, DIS) 2021-2023
- Guest Editor of Interactions Magazine 2022: For the “Spirituality in Design”- July-Aug issue.

- CHI'22 Workshop Co-Organizer, titled "Integrating Religion, Faith, and Spirituality in HCI"
- 4S Panel Organization and Mediation 2021: On understanding what it means to practice good relations between technologies and humans who adhere to the spiritual way of life.
- CSCW Student Volunteer (SV) Position, Nov '18, Nov '19: Mobile app development, session coordination, and photography.

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